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AN APPROACH
TO
SOCIAL MEDICINE

AN APPROACH TO SOCIAL MEDICINE

BY

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Johns Hopkins University



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5
The subtil Chymick can devest
And strip the creature naked, till he finde
The callow principles within their nest.
There he imparts to them his minde,
Admitted to their bed-chamber, before
They appeare trim and drest
To ordinarie suitours at the doore.

GEORGE HERBERT

"A household god made of wax, that had been carelessly left standing beside a fire in which precious Campanian vases were baking, began to melt. It addressed bitter complaints to the element. "See", it said, "how cruelly you treat me! To these things you give durability, me you destroy." But the fire answered: "You have nothing to complain of but your own nature. As for me, I am fire, always and everywhere."

W. HEINSE

PREFATORY NOTE

For a number of years I have offered to graduate students in the department of social economics instruction in the clinical study of the personality. This manual embodies, first, my point of view in teaching the student to observe and interpret and, second, an attempt to stimulate creative thinking about conduct.

The subject's diverse relationships are responsible for a number of repetitions deemed necessary in the interest of emphasis and clarity.

As a text-book it should be supplemented by reference to case-studies illustrating the topic under discussion and explained by clinical demonstrations of typical cases.

The philosophic development and scientific application of the principles herein advocated are the result of several thousand cases brought to my attention as consulting psychiatrist to various civic and private welfare agencies, such as hospitals, bureaus and courts.

F. L. D.

*Johns Hopkins University.
Baltimore, 1924*

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An antique cameo reproduced on the title-page shows Aesculapius, the god of medicine; Hygeia, the goddess of health and Telesphorus, the deity of convalescence. They may symbolize the fields of General Medicine, Preventive Medicine and Social Medicine.

CHAPTER I

THE STATUS OF SOCIAL MEDICINE

GENERAL INTEREST IN CONDUCT

Although human society always has been keenly interested in the way people manage their appetites and feelings, recognition that impulses and attitudes may be analyzed, measured and compared, is of recent development. Efforts to renounce vindictiveness and to prevent sympathy from deteriorating into sentimentality have been slow in developing administrative policies. An undue retardation of culture as the result of poverty and human wastage, however, is helping to clarify our notions about virtue, although such vital problems as human reproduction must often be submitted to the technic of the "intellectual and moral philosopher."

Social agencies are reluctant to redraft moral laws to admit the play of fundamental forces in the situations with which they have to deal and to recognize that Nature often will have her way let shame say what it may. "Let no man trust his victory over his nature too far," says Bacon, "for Nature will lay buried a great time, and yet revive upon the occasion of temptation."¹ Only when the spirit forsook the clouds and began to scrutinize the wayside did the real origin of ethical codes force itself upon our observation. Then we saw in the unsocial personality traits of character confused and needing direction yet potentially efficient.

In our haste we have compared "criminality" to disease and have treated human "badness" like sickness. In this new situation our altruism grew bewildered without an authoritative leader and was satisfied, temporarily, to follow the "Social Worker," generally "adopting remedies implying a complete reconstruction of society, or even a reconstruction of human nature,"² with scant recognition of the principle of *Laissez-faire*. Realizing then that conduct requires for its analysis a type of scientific training apparently available in the new field of experimental psychology, we adopted

¹ Bacon, *Essays*, London, 1885.

² Sumner, W. G., *What Social Classes Owe to Each Other*, New York, 1920.

psychological diagnosis as a consummation of practical ethics. With its limited social perspective psychology's diagnostic errors frequently had to be set right by the psychiatrist, generally a medical craftsman but often a philosopher also and a student of "abnormal psychology." So much broader was psychiatry in its ability to utilize biological concepts, the real foundation of much of the so-called psychological diagnosis, that it has now assumed in large part responsibility in studies of the personality.

Many individuals suffer from failure to control their appetites and feelings yet refuse to acknowledge themselves ill, while many more have little success in meeting the requirements of their communities although they never would abide segregation. And although defective social adjustments nearly always possess elements calling for medical advice and are sometimes due primarily to disease, immediate or remote, the causes of defective conduct can more often be traced to biological than to pathological sources, to the springs of character rather than to the lair of the microbe.

Thus a need arises in welfare work for a field of preventive science to which social science, psychology, psychiatry and various other departments shall contribute but upon no one of which shall the entire burden of responsibility fall. Such a field functions more naturally as an *attitude*, a point of view, rather than as a specific department. It may be called *Social Medicine* and its technic *An Approach to the Field of Social Medicine*. The social administrator, the psychologist, the psychiatrist, the internist, the industrial physician, the surgeon, may contribute each from his own field and at the same time view the total situation as a *synthetic* problem, a system made up of various elements.

APOLOGIA

If we question the propriety of the term Social Medicine to indicate the fundamental approach to the analytical data of conduct, let us reflect that sickness has become the laudable concern of medical art and that from infancy to old age infirmity is the most widely utilized and most generally discussed agent in helping us evade our responsibilities and secure our wishes. It is a staff to the laggard, an excuse for the tyrant, it comforts the downcast and brings hope to the guilty.

But on the other hand illness is an *avowed enemy*, the most fre-

quent contributor to poverty's vicious circle. Unemployment, want of food, poor housing, inferior physique and mentality, dependency, delinquency and crime, though instigators of disease, are less to be feared so long as they are opposed by physical vigor.

Destitution and sickness are old companions and since the former is so often the result of the latter the continued administrative separation of the two problems of poverty and sickness, as clearly pointed out by Sir Arthur Newsholme in his discussion of public health administration,³ is inconsistent with official responsibility.

Since preventive science applied to social wellbeing is often a medical problem and since the establishment of a healthy regimen generally calls for remedial or hygienic measures involving the science if not the art of healing, it is rational to assume that the term Social Medicine more nearly than any other available expression is synonymous with the spirit of Public Welfare.

Society for example is placing an increasing reliance upon the factors of nutrition to save mankind physically, mentally and morally.⁴ Suitable food is the basis of health and healthy people generally are happy. Happiness, according to shrewd observers of conduct, is the final goal of human endeavor, the test of efficient citizenship. More and more clearly we are recognizing food as the foundation of superior intelligence, well balanced character and physical vigor, and we are advocating as the first duty of the state an assurance to expectant mothers of adequate nourishment. Our newer knowledge in this domain has come largely from medical fields.

FUNDAMENTAL SOURCES

When society feels outraged toward a person or a tendency the primitive purpose of its slogan of opposition is to arouse popular resentment immediately. "Child Labor" is an example, a misnomer, heedless of physiological development and of alien customs as factors in an analysis, yet very effective in propaganda. As emotional stimuli these catchwords represent thoughtless estimates of a social climax adopted without reflection upon its causes and relations. "Most of our community problems follow," states an editorial writer, "the favorite ruse of the hucksters of political gim-

³ Newsholme, Sir Arthur, *Public Health and Insurance*, Baltimore, 1920.

⁴ McCollum, E. V., *Supplementary Protein Values*, *Jour. Biol. Chem.*, Vol. XLVII, p. 175.

cracks in an intrigue to arouse special appeals to class prejudices, none of which are based on constructive objectives." "The amateur social doctors," said Sumner, "are like the amateur physicians—they always begin with the question of *remedies*, and they go at this without any diagnosis or any knowledge of the anatomy or physiology of society".² To emphasize fundamental elements of social welfare must be the purpose of our approach to the organized field of the hygiene of conduct.

PHILOSOPHICAL CONTRIBUTION

As a rational expression of interest in the critical examination of happenings, doctrines, practices and beliefs, philosophy is the parent system from which science or systematic knowledge emerged. Although summoned in part to calm man's primitive fears, philosophy lingers to minister to his curiosity. Thus it has provided religious formulae as omnipotent therapeutic agents, and physical symbols denoting profound relationships in celestial mechanics.

While its ultimate aim is discussion of reality, nevertheless philosophy shuns the tyranny of the commonplace. Practice must rest upon a body of tested and organized knowledge which develops as soon as philosophical speculations are defined and exact meanings are acquired. Thereupon such inquiries detach themselves from the parent system and establish a separate field or science of their own, able to predict results with reasonable accuracy. The scientific fields of physics and chemistry, biology and economics thus have arisen. Preventive science is one of philosophy's latest progeny. It is necessary, therefore, first of all to acquire a philosophical attitude toward social problems and to be able to utilize the technic of logic.

HISTORICAL CONTRIBUTIONS

"History," said the de Goncourts, "is a novel that has happened; the novel is history that might happen," and Victor Hugo eulogizes the historian of character in comparison with the chronicler of events, as one who must descend into the impenetrable casemates where crawl the wronged and their oppressors. Goldwin Smith⁵ on assuming the chair of Modern History in Oxford stated that the subject

⁵ Smith, Goldwin, Lectures on the Study of History, New York, 1866.

could not advance beyond a stage of verbal definitions until it were able to analyze the phenomena of character by some rational method and determine, as its philosophical basis, the essence of morality. Interpreting the function of history as the recorded manifestation and improvement of human character through free action, he pointed out that such phenomena as vice and virtue must be the natural starting point for this inquiry aiming to give real precepts for the treatment of moral infirmities and the attainment of moral health. If its end and key is the sum of human existence, history is a series of struggles to elevate the character of humanity in all its aspects, rising sometimes to an agony of aspiration and exertion and frequently followed by lassitude and relapse, resembling the conflict between man's will and his fatigue from opposing forces.

With an increasing ability to interpret character scientifically, it is clear that history has emerged from its philosophical stage to become a constructive science whose task, as Viscount Bryce⁶ pointed out in connection with the Paris Conference, needs supermen for its accomplishment. Thus it behooves those who are guides in human welfare, if unceasing and exhausting social and intellectual waste is to be avoided, to know what has been done by the world in the way of social and economic experimentation. Such is the suggestion of President Butler⁷ who has urged students of law to lay the greatest possible stress upon the fundamentals of economics and upon the history of social organization, social endeavor, social success and social failure.

Adequate sympathy can be acquired only from acquaintance with the capacities and ideals of mankind as expressed in literature and art, with its achievements and ambitions as recorded in history, and with the nature and laws of the world as sought by philosophy. We recognize historical interpretation as a second important guiding principle in the practice of preventive science.

EXPERIMENTAL CONTRIBUTION

But a philosophic point of view and historical insight are ineffectual without information gained by objective experience. Theories or speculations are valuable stimuli to the scientific imagination, in-

⁶ Bryce, Viscount, Address, Institute of Politics, Williamstown, 1922.

⁷ Butler, N. M., Repts. Amer. Bar Assoc., Vol. XLVII, 1922, p. 278.

tent upon perfecting the art of society. For centuries we have dreamed of a system of classification for the easy analysis of temperaments. Toward this end fancy now is playing with the system of endocrine glands. Repeated trials thus end too often in failure until guided by the observations of practice. Slowly personality is revealing itself as the complex resultant of various forces some of which are intimately related to archaic organs and we glean this information from biological experimentation.

PREHISTORIC MEDICINE

The Persians, says an early Greek manuscript, lighted the light of the leechcrafts (medicine), although Apollo invented the irons (knives) for healing; Aesculapius the curative process, and Hippocrates the diagnosis of sickness.⁸ This apparent oversight of the medical skill of Egypt, whose art antedated the Persian conquest by a thousand years, together with its acquisition and development by the Hebrews and Babylonians, evidently arose from the proximity of the classical historian of Persian-Egyptian science to the activities of the Greek *father* of medicine in the fifth century, B.C.

Shorn of myth the medical art appears to have originated in phenomena less akin to pain and physical incapacity than to feelings of fear and selfishness. Traces of such interests first assert themselves in primitive magic or witchcraft whose charms were potent in coercing individual appetites, fears and passions along traditional paths. The presence of these archaic practices still persists in our intrinsic belief in the efficacy of "drugs."

MAGIC

Egoism, persisting socially as selfishness, is the natural tendency of the primitive person. Membership in the herd, however, offers great rewards—power, safety, affluence. In the resulting conflict between self-interest and sociability, the individual and the pack make many mistakes before the best way is found. Ignorant of the relations of causes and effects, social success and individual well-being appeared to the novice to be largely a matter of luck, under supernatural control, beyond the reach of ordinary mortals. In order to free himself from fear or to play the tyrant, two qualities

⁸ Cockayne, Oswald, Leechdoms, Wortcunning & Starcraft, London, 1864.

about which commonplace people are most solicitous, rapport with spirits had to be established. Crafty wits were not slow in seizing upon such an opportunity for gain and have been able ever since, so fallible is human nature, to continue the exploitation of the mysterious. Thus arose the magicians and medicine-men, the precursors of the three learned professions. Unusual sights, sounds, tastes and odors make fundamental appeals to the feelings. Noisy apparatus, elaborately displayed, and persistent suggestion; nauseous potions, euphonious formulae, and smoking censors are omnipotent stimuli in rousing the credulous. The medicine-man's rattle is still his infallible advertisement.

LUCK

As a part of the magician's ritual in pacifying spirits and quieting ghost fear, a primitive force so potent as still to cast its shadow over the joys of childhood, luck has always held a leading position. In spite of its heathen utilization in predicting good or ill fortune luck rests upon a more or less rational basis—the theory of probability which emphasizes the existence of a logical relation between two sets of propositions.⁹ Thus incidentally magic adopted a rational basis of action, although its interpretative faculty still generally proves fallacious. Even today when a prediction is realized its attribution to “psychic causes” loses sight of the relation between trite fancies and their commonplace prototypes. The failure of a pupil to appear at the usual hour led to the suggestion: “He may have slipped this rainy morning and broken his leg.” Later a message verified this “psychic conjecture.” Telepathy here loses its significance as an explanatory force when the circumstance is correlated with the daily commonplaceness of attributing social failures to broken bones.

SUGGESTIBILITY

A fundamental influence upon social development, especially in religious practices and political devices, is suggestibility. This primitive element of power has its origin in the concept of suggestion, a psychological view that in the crowd sensory tendencies already developed into ideas, instead of becoming further organized as usual, elude the control of reason and lead a disorganized existence. Sui-

⁹ Keynes, J. M., *A Treatise on Probability*, London, 1921.

cide thus has been rendered epidemic through suggestion. "Witch," "personal liberty," "prostitute," "feeble-minded," all are watchwords with strong suggestive connotations. Trusting to numbers the individual takes reason for granted, forgetting the value of personal deliberation. The crowd may do many things better or worse than the individual himself. And when this disorganized complex from the realm of reason is reinforced by uncontrolled affective tendencies or emotions, the mob spirit at its worst is released, as in the case of lynching.

ALLIANCE WITH RELIGION

With fear and anger inadequately controlled, alert toward insinuations, suspicious and of unsteady judgment, yet with a fundamental craving for sympathy, primitive folk fall an easy prey to the medicine-man who straightway becomes a directing force in the community. As the magician's power developed the rôle of spiritual advisor more and more his armamentarium utilized earthly remedies until under the Hebraic dispensation outlined in the books of Leviticus and Deuteronomy a rational system of epidemiology and community welfare was actually practiced. Among the Romans salvation came to mean bodily sanity, the religion of *Salvator*, the god of bodily health, while the apparatus of the medical art grew to have a kind of sacramental character, the body becoming truly but a quiet handmaid of the soul.¹⁰ With the supervision of physical vigor added to the absorption in posthumous existence and the function of deputy emphasized by the use of elaborate ritual, medicine and religion formed a therapeutic alliance whose social possibilities have never adequately been realized. Although afterward medicine took an inferior position in the liturgical scheme, still such instruction as is contained in the *Regimen Sanitatis*¹¹ and other collections of cloistral precepts was freely prescribed for the "cure of sore and soul." The important part physical healing plays today as a key to evangelical extension in "heathen lands" is too well known for comment.

MEDICAL FIELDS

The healing art lends at least its name to three broad fields of scientific activity: (a) *General Medicine*, concerning itself with the or-

¹⁰ Pater, Walter, *Marius the Epicurean*, London, 1891.

¹¹ Packard, F. R., *The School of Salerno*, New York, 1920.

thodox art of restoring health; (b) *Preventive Medicine*, seeking to maintain healthy conditions; (c) *Social Medicine*, helping to harmonize human behavior and to organize conduct. Besides having human welfare as a common aim, each of these fields has a characteristic purpose and furthermore is divided into a number of special departments with specific methods and separate organization. Internal medicine, surgery, and psychiatry exemplify the first division; public health administration, sanitation and epidemiology are branches of the second, while Social Medicine, utilizing the data from both these fields, attempts to bring about a harmonious organization between personal tendencies and their surroundings. Definite departments of Social Medicine include various agencies dealing with the family as a neighborhood unit, with the interests of infancy, childhood and youth; with educational and industrial hygiene in its relation to conduct; with the administration of justice through courts of law; with punitive and corrective institutions and with other social phenomena. General and Preventive Medicine are more strictly analytical fields from whose data Social Medicine seeks to synthesize or construct an adequate social adjustment.

BIRTH OF MEDICAL SCIENCE

The remarkable development of experimental science seen in the work of Hippocrates of Cos, "the father of medicine," in the middle of the fifth century B.C., and the impetus, started by him and continued by Aristotle a century later, to regard disease and the study of the human organism from a biological rather than from a supernatural standpoint, are epochs of great historical importance, for they mark the birth of scientific medicine. Preserved from destruction and neglect by Arabian culture, their work constituted the chief and indeed the only dominant, scientific foundation for medical knowledge, unassailable up to the period of the anatomical studies of Leonardo and Vesalius in the sixteenth century and the physiological discoveries of Harvey in the seventeenth century.

Generally the mystical and mercenary elements of the curative art completely clouded its scientific beginnings. "What if I were to recount the mysteries for you?" says the Church Father, Clement of Alexandria.¹² "You have among the gods a doctor. He was

¹² Clement of Alexandria, Loeb Clas. Lib., London, 1919, p. 61.

fond of money. Gold was his ruin, it shone on his hands." Evidencies of a really experimental and progressive knowledge there were, doubtless, yet for the most part cures were held to take effect through a machinery easily capable of misuse for purposes of religious fraud. Except as a monastic accomplishment, medicine, during the Middle Ages, was mostly a metaphysical pursuit; from an experimental standpoint, "a baffled ghost that none would see or hear."

MODERN MEDICINE

Emphasis upon the objective features of disease together with the rediscovery of the art of observation led such men as Sir Thomas Browne¹³ "to suspect the efficacy of relicks to restore others unto life." The sixteenth century had contributed something at least in mapping out the coarser structures of the body and in crude interpretations of organic functioning. Causes and interrelations had not, however, been discussed intelligently. Many empirical remedies had been discovered, among them cinchona, yet our forefathers' physicians gave the following prescription¹⁴ for convulsions:

A day or two before the change and full moon give Peacock's dung, dried and powdered Papmilk, or Virgin Honey, for 4 or 5 days. Dose as much as a sixpence will lift, adding 2 or 3 grains of the powder of a navelstring, if to be got.

The poor were but lightly considered, except for use as targets in dissensions with the price-cutting apothecaries. The quality of medical sympathy current in the seventeenth century is well illustrated by a reply of Sir Samuel Garth,¹⁵ physician and poet. Reminded by Steele of his duty to his patients he replied that it was no matter whether he saw them or not for nine had such bad constitutions that no one could save them and the other six had such good ones that all the physicians in the world could'n't kill them. The trend of scientific discussion still was metaphysical, the medical candidate being required to expound the text of Galen. Until about 1800 there was little insight in applying experimental methods to medical thought. In no field was the spirit of social welfare at a lower ebb than in the supervision of the insane, the delinquent and

¹³ Browne, Sir Thomas, *Pseudodoxia Epidemica*, London, 1646.

¹⁴ Quoted from 17th cty. MSS.

¹⁵ Ashton, John, *Social Life in the Reign of Queen Anne*, London, 1883.

the destitute. In 1797 it was stated that one-ninth of England's populace were charity cases. No inquiry into the history, personality and causes of distress of those seeking aid was made until it occurred to Mathew Martin,¹⁶ Esq., to investigate and follow one hundred and twenty poor-relief cases. This appears to be one of the first recorded attempts to do organized social investigation among English speaking people. Today three-fourths of the medical profession alone in England are engaged in some form of social service.³

In 1805 Pitt made the first attempt to establish state control of public health. Soon, however, it was abolished and was not again seriously considered till a much later date. Up to 1850 medical science had assumed no public or social function except the enforcement of crude methods of quarantine accidentally affecting society. Rarely were physical or mental complaints considered in relation to the community. The first annual report of the English Poor Law Commission¹⁷ admits: "The evils we found ourselves called upon to remedy were a large class connected with the administration of medical relief." Writing in 1837 a leading authority on the "practice of physic" stated that the prevention of phthisis belongs to the police and not to the physician.

RISE OF SOCIAL MEDICINE

In spite of discouraging features the foundations for a broader science of social welfare had been laid when, with the application of experimental methods toward the middle of the nineteenth century, the need of adopting humane and rational principles in correcting both mental and physical tendencies toward anti-social conduct began to receive recognition. The new tendency toward medical specialization, however, still further limited the physician interested in the immediate or organic problem to the exclusion of social or ulterior factors. Environmental and community relations of illness and poverty generally were ignored and little attention was paid to the patient's biological characteristics and psychological reactions. Character and conduct were assumed to embody extraneous phenomena best dealt with in a crucible no more exact than that of the poet or the novelist.

¹⁶ Colquhoun, P., *A Treatise on the Police of the Metropolis*, London, 1800, p. 360.

¹⁷ Poor Law Commissioners, *First Annual Report*, London, 1835, p. 29.

It was early recognized as a preliminary to the study of lower organisms that prolonged observation of their biological characteristics is necessary in order to draw rational inferences. In spite of the application of sound methods in the laboratory the instinctive data of the human animal have been slow in assuming a part in the drama of the medical consulting room. In legal tribunals, also, *conduct* generally is "set to be weighed in the church's balances."

Although the patient's medical history represents an intensive study of his illnesses it usually is wanting as a systematic personal record, each specialist observing only those facets of the individuality toward which at the moment his attention is turned. The *physical* complaint of the "bad" boy or wanton girl so overshadows the *social* defect resulting from instinctive conflicts as rarely to suggest to the general medical consultant the real motive lying submerged in the deeper strata of character. So too in welfare administration, economic situations often are permitted to outweigh all other features and to minimize the real factors at the base of poverty.

Not only has our professional vision been slow in adjusting itself to the point of view that human progress lies in *preventive* science having a *medical* approach but our community insight has been dull in grasping the importance of such diagnostic and therapeutic contributions to society as the conservation of children. Preventive science tends to correct and restrain in youth both mental and physical tendencies toward anti-social conduct. Economic science attempts to raise standards of life among the masses and to reconstruct the milieu whence vice and misery spring. Each has a useful ally in Social Medicine with its function of assembling complete analytical data, of arranging, unifying and suggesting plans for improving the individual's social efficiency and of acting as an adviser in the administration of suitable assistance.

Among important factors in a combined scientific approach where the social medical field may play a leading part may be mentioned rational attempts to perfect populations by discouraging the propagation of undesirable variations and by improving the nutritional conditions of prenatal life; recognition of the need of maintaining an equilibrium between births and deaths if the earth's capacity to supply food is to be conserved; family restriction among the poor, remembering, however, that not all are biologically handicapped although they may lack economic prosperity; recognizing a more

rational economic and social policy toward marriage, permitting earlier unions among the better classes and not penalizing parenthood among the valuable poor;¹⁸ encouragement of a broader tolerance for the female sexual offender,¹⁹ making the male equally responsible and establishing sympathetic care for illegitimate progeny; giving every child fair opportunities of realizing his or her natural capacities and giving to all children such an environment as will protect them from disease, ill treatment and criminal propensities, thus providing a basis for sound physical and mental development; the direction and establishment of adequate recreational facilities for all; the training and direction of individuals for and during employment, tending thereby to conserve all interests and to prevent casualization of economic forces; discovery of the motives contributing to delinquency and misconduct and the establishment of sympathetic community relationships; assistance in general medical, legal and religious adjustments of unstable individuals; direction in organizing and administering social insurance and economic aid.

Utilized in this way Social Medicine may be called a specialization in human relations, recognizing the most important of such relations as biological and therefore more intimately related to the medical field than to any other single scientific group. Already the significance of its contribution has been established in educational, legal and industrial fields. A number of European universities have endowed departments of Social Medicine, although the curricula are not uniform. In America its academic position generally is represented by such individual branches as Industrial Medicine, Environmental Medicine, "Criminology," Psychiatry, "Mental Hygiene," and various other important but somewhat limited aspects of the total field of human behavior and conduct.

SOCIAL SERVICE AND SOCIAL CASE-WORK

Until its more complete organization during the latter part of the nineteenth century the dispensation of charity and the investigation of community needs were in the hands mainly of benevolently disposed persons many of whom were affiliated with religious orders. As early as the seventeenth century the order of "Filles de la Charité," established by St. Vincent de Paul was a recognized hospital social

¹⁸ Inge, W. R., *Outspoken Essays*, "Birth-rate," London, 1921.

¹⁹ Brown, Fr., *The Church and Prostitution*, Dublin Rev., Vol. 170, No. 340.

service agency. Wanting the scientific point of view, relying upon crude descriptive estimates only, the results of social relief were more or less casual, although imbued with the noblest spirit. The loose administration of poor relief already mentioned is a good example of this haphazard philanthropy.

Evidence based upon constructive observations gathered by trained investigators and applied to social needs sympathetically yet critically is recognized as a vast improvement over the mediæval system long in vogue. With the rapid growth of this new field, the urgent demand for social service workers has often interfered with adequate training and practice. Moreover, if other professional agencies are to be convinced of its integrity a true appraisal of the function and position of "Social Case-work," as this type of welfare now is called, should be adhered to, emphasizing its altruistic features, recognizing its function to investigate family and personal situations, yet realizing also its subsidiary position. As a form of technique Social Case-work utilizes special methods to help the individual and the community to harmonize their differences according to certain standards. It implies a scientific study of the personality, a knowledge of community resources and their utilization to the best advantage in developing the individual's social efficiency or in securing suitable treatment for dependants. Case-work is not, as is sometimes assumed, a complete agency in itself. Rather it is a factor to be utilized by *welfare* agencies as a part of their scheme. Neither should case-work be regarded as the unique result of Social Service. Judicial history is filled with evidence to the contrary.

It is true, however, that all whose chief interest deals with human relations are indebted to "Social Service" for the part it has played in applying exact standards to situations involving family problems. Practically all fields of social welfare now recognize as a working basis the use of the historical-analytical method of approach commonly called case-work. It is not the concept but the extension of its application that is novel.

LIFE'S CRISES

The sociological significance of life's crises, or situations in which the need of the individual is the chief theme, has been surveyed by

VanGennep²⁰ in *Les Rites de Passage*, and seems to have the function of assisting the person to pass from one social status to another. These so-called "crises of the threshold" are assumed to occur at birth; baptism; entrance to school; puberty; the choosing of occupation; the initiation into fraternities, professions, and the like; the entrance into marriage, parenthood, and death. Among primitive people each of these occasions has ceremonies of great importance. Each of these periods of suspense presents welfare problems. In dealing with each the preliminary technic of civilized people is identical. Briefly it consists, more or less thoroughly, in collecting, classifying and explaining facts and observations relating to the individual's intelligence, character and health as these factors affect his social efficiency. Complete data should be available from the biological, psychological, medical and social fields. Not until these various aspects have been examined are we in a position to make a definite recommendation. All this is the task of *analysis* and is a requisite to sound welfare work.

But while it is the function of analysis to supply data it is beyond its province to undertake reconstruction. This building process is the function of *synthesis*, a more clearly administrative procedure. Although well equipped administrative agencies often perform both tasks, they recognize the need of special advice in developing individual qualifications. Every complete case analysis will show trends of special activity. These trends generally constitute the problem which needs for its elucidation a survey of various fields and administrative agencies.

RELATIONSHIP TO PSYCHIATRY

With a master hand Lugaro²¹ has reviewed some of the causes of anomalies and predispositions in human reactions and has pointed out their relations to defects in the social structure resulting in a deficiency of production. To remedy this situation the necessity of having a thorough understanding of the specific organ and of making an analysis of the elements and a "synthetic reconstruction" of all its relations are shown to demand a broad conception and understanding of technical fields. From a survey of the fundamental

²⁰ Van Waters, Miriam, *Pub. Am. Soc'l'g'e'l. Se'ty*, Vol. xvi, p. 209.

²¹ Lugaro, Ernesto, *Modern Problems in Psychiatry*, Manchester, 1913.

problems Lugaro assumes that human behavior and conduct, while coming into contact with other sciences, have their greatest relationship to the department of psychiatry.

If this attitude is to prevail psychiatry should connote a much broader field than that now assigned to the alienist, "the expert in the forensic aspects of insanity," or even than that of a psychiatry concerning itself with mental *diseases* only. Southard's²² conception of a field which he called "Personal or Individual (medical) Mental Hygiene, dealing with questions of practical psychiatry and character work in employment and vocational choice," coincides with many aspects of the field of Social Medicine. Adolf Meyer's²³ definition of psychopathology as "the study of abnormal behavior and of the modifiability of its determining factors" gives unity and system to the facts of human reactions in terms of "instincts, habits, interests and specific experiences and capacities." So far as it goes this method of analyzing the personality in terms of its historical data and of their experimental value in social adjustment is the most rational contribution to Social Medicine from any specific medical field.

Aside from its logical and suggestive relation to pathological and psychopathological conditions generally termed insanity, psychiatry inaptly attempts to cover various behavior and conduct situations occurring daily in the family, the school, the factory, the court and in various other units of society. Few such participants show social irresponsibility needing segregation and complete physical care. Justice and civic economy demand voluntary self-support from each member of society able to meet the usual animal needs. Social parasites generally are *personae non gratae* to the community. It is the *next step in social organization*—the development of control over primitive instinctive tendencies when subjected to conditioning factors of the herd—in which most persons need help. Human motors show various degrees of capacity and may require standardization on the basis of their relative ability to carry a given load. Few of the disabled, however, show *broken gears*. Many show *poorly adjusted mechanisms*. *Repairs* are definite problems of Gen-

²² Southard, E. E., Alienists and Psychiatrists, Bul. Mass. Dept. Ment. Dis., Vol. IV, No. I, p. 171.

²³ Meyer, A., The Problems of Mental Reaction-Types, Psych. Bul., Vol. V, No. 8, p. 252.

eral Medicine with a psychiatric approach. *Adjustments*, involving a more thorough knowledge of surroundings and expectations, show best results when viewed from the standpoint of Social Medicine.

If it were necessary to emphasize the need of a broader practice than that furnished by psychiatry, a mere catalogue of various interests complicating conduct problems to which psychiatry professes to have little or no general relation will show the inadequacy of the term. And if the term, satisfactory in its own field, is only poorly adaptable to a new situation, why cling to it as a definition? How, for example, does psychiatry connote the predominant social interest of preventive science in school hygiene, in vocational hygiene, in the administration of social insurance, in the various interrelations of predelinquent, delinquent, dependent and neglected individuals and in a variety of personal welfare problems which are not the direct concern of the community? All these situations demand special analytical facilities, it may be from the department of psychiatry or from internal medicine, or from surgery. It may be from the department of sanitation or from the epidemiologist. Yet they ask more than an analysis in one field or from a limited point of view. In order to establish satisfactorily a helpful and sympathetic equilibrium between the individual and a variety of surrounding influences a synthetic estimate of all fields must be available. To be sure this consummation of effort may emerge from the activities of the psychiatrist, or from those of the internist, the public health administrator, the epidemiologist or otherwise. In any case the ability to advise wisely will be measured by one's viewpoint, training and experience in analyzing, selecting and integrating the various factors of the personality as these are emphasized in the standards of Social Medicine.

SOCIAL MEDICINE DEFINED

Health, conduct and economic efficiency are intimately related but no one field of human endeavor may be said to explain them all. Speaking from long experience in observing delinquents Sir Evelyn Ruggles-Brise²⁴ concludes that human progress lies in preventive science, including on the one hand medical science, whose diagnostic and therapeutic contributions, applied early enough, tend to

²⁴ Ruggles-Brise, Sir Evelyn, *The English Prison System*, London, 1921.

correct and restrain both mental and physical tendencies toward antisocial conduct; and on the other hand social science, which tends to raise standards of life among the masses and to reconstitute the milieu from which vice and misery spring.

Whether as a separate field or as an adjunct to other fields, Social Medicine has a clearly defined function—social here referring to the problem's public character, medicine to the knowledge and practice of welfare. Defined, *its purpose is to further the application of scientific methods of organization to man's social habits in order to determine their usual biological characteristics, to discover the sources, causes and effects of instability and to establish a sympathetic equilibrium between the organism's innate and acquired tendencies.*

THEORY AND PRACTICE

Eagerness to utilize the most efficient and most recent means of dealing with social problems sometimes leads to the overzealous application of immature deductions. Recent attempts to popularize meagre but suggestive evidence that the functional activity of the endocrine glands moulds personality, exemplify such a hazard. Vitamin therapy in under-nourished states is another case in point. Such hasty conclusions discredit the activities of the theorist.

The scientific theorist has a rational position, nevertheless, in the field of public welfare since laboratory experimentation must be given social tests in the community before utilization in the determination of public policies. Attempts to make mentally inferior persons self-supporting through specialized training, supervision, social insurance and other probational agencies applied either in their own homes or in group homes are examples of the application of theory to social experimentation.

For present purposes the theorist may be defined as the student of general experimental methods who, while not allying himself with any special branch, brings to the entire field of scientific subdivisions a unifying vision. Sympathetic motives in the interpretation, organization and administration of human conduct contribute largely toward making the view point of Social Medicine more sensitive to biological observations than that of the experimentalist working with less highly organized material. The danger lies on the one hand in the too ready adoption of superficial, qualitative or

descriptive technical methods instead of quantitative or precise ways and on the other in the opinion that social assistance is too humane to be scientific.

THE COMMUNITY A SOCIAL LABORATORY

Valid objections have been raised to the inexactness of the analytical methodology of studying human conduct. Superficial and sentimental impressions arise from limited moral traditions, insufficient training, inadequate judgment and ignorance of available social agencies and instruments. It is generally recognized that human problems must be defined in the clinical laboratory where they respond to the same laws that apply to lower organisms. But the adjustment is the work of the social laboratory—the community, where experimental surroundings are less under control and where a complex system of justice often vitiates the best interests of the individual. For example, the mechanism of heredity in the experimental laboratory may be under definite control and subject to exact interpretation, while in the community its human counterpart is never subjected to exact repetitions of conditions in surroundings. While the two unquestionably respond to the same laws, identical results in their application are questions to be submitted to the theory of probability. From a so-called humanitarian standpoint, therefore, there is a natural drift toward traditional, descriptive, less exact terms.

While the word experiment may appear too mechanistic to apply to situations involving the display of human sympathy, on further consideration its application to problems of civilization will be seen to imply fairness and not oppression. Social tests in reality lead to the broadest opportunities for the development of inherent possibilities, the ideal extension of justice to the individual. For whether or not the unusual shall survive depends upon its ability to win popular approval, and this requires opportunity.

In utilizing social innovations, however, we may well recall the counsel of one who saw clearly what classes of society owe to each other. "We have," said Sumner,² "a body of laws and institutions which have grown up as occasion has occurred for adjusting rights. Let the same process go on. Practice the utmost reserve in your interferences even of this kind, and by no means seize occasion for

interfering with natural adjustments. Try first long and patiently whether the natural adjustment will not come about through the play of interests and the voluntary concessions of the parties. Thus if we can acquire a science of society, based on observation of phenomena and a study of forces, we may hope to gain some ground slowly toward the elimination of old errors and the reestablishment of a sound and natural social order."

CHAPTER II

SCHEME OF APPROACH

TECHNIC

Pain and unhappiness in human society do not often result from the frugality of Nature. Man's indifference to the fitness of his physical environment is the chief source of his discomfort, furnishing frequent innovations to pathology and a constant stimulus to research in General Medicine. The sources of this indifference, its individual variations and the operation of cultural standards in organizing fundamental needs and interests, supply the theme and object of practice in Social Medicine.

Social investigation employs the usual instruments of precision adapted in General Medicine to the accurate observation of structures and functions. The apparatus of the clinic and the laboratory thus contribute materially to our estimate of the personality.

A dissimilar device, utilized somewhat more extensively by Social Medicine yet as important as any other experimental instrument or critical method, is the record of the individual's life. This historical account, anecdotal, official and scientific, should be available for consultation in every case brought to the attention of social agencies.

THE CASE-HISTORY

The value of secular history lies not only in the documentary worth of records preserved but also in their teaching function. "Nowadays," says Maitland,¹ "we may see the office of historical research as that of explaining, and therefore lightening, the pressure that the past must exercise upon the present, and the present upon the future. Today we study the day before yesterday, in order that yesterday may not paralyze today, and today may not paralyze tomorrow." The history of a race is the record of its attitude toward fundamental tendencies and its ability to bring about their organization. The history of the individual is the record of his

¹ Cardozo, B. N., *The Nature of the Judicial Process*, New Haven, 1922.

mode of responding to inborn appetites and feelings whose social value depends upon the completeness of their organization into character. Records of this nature are of definitely practical value. Harvard University,² for example, in the physical examination of students finds in the historical account of each individual data guiding his teachers in estimating his nervous stability. An analysis of these histories furthermore suggests that students whose introductory anamnesis showed special traits tend to fall into significant performance groups whose total accomplishment analyzed after four years of observation verifies earlier predictions.

If the case-history is to justify its claim as a scientific instrument of precision its compilation must receive logical treatment, systematic organization and concentrated attention. The acquisition of the anamnesis or recollection—an element, perhaps, of even greater importance than the physical examination—may be compared to the legal procedure of securing evidence from testimony. This method assumes on the part of the deponent or narrator responsibility and accuracy, and on the part of the examiner a recording insight and ability to judge facts.

In assessing the value of remembered and recalled data, however, it should be borne in mind that "there is nothing more difficult than to tell the truth." Moreover, the observer should not assume that the first interview represents everything that may be discovered; pertinent facts generally emerge at each subsequent conference, a condition resembling all other experimental situations. Personal history, therefore, is to be taken with proper reservations. In his discussion of the accuracy of answers referring to past events Ryerson³ quotes Mlle. Borst's conclusion that the degree of fidelity of a hesitating witness may be put down as 56 per cent; of a confident witness 86 per cent; of a sworn witness 92 per cent, although he feels that this statement is somewhat over sanguine.

The aim of preventive science applied to welfare embodies a synthetic reconstruction of the existing situation, in the accomplishment of which an analysis of the various social fields is fundamental. To present the material for consideration is the function of the case-history. Its acquisition requires a sympathetic attitude on the

² Cobb, Stanley, Report on Neuropsychiatric Examination of 1141 Students, Jour. Indust. Hyg., Vol. III, p. 309.

³ Ryerson, E. S., The Process of Diagnosis, Toronto, 1922.

part of the observer and the confidence of the narrator or subject, and of his kin. Various assisting and consulting agencies must be enlisted and a legitimate degree of imaginative and theoretical insight employed. Apropos is Wellman's⁴ suggestion that a "cross examination requires the greatest ingenuity; a habit of logical thought; clearness of perception in general; infinite patience and self-control; power to read men's minds intuitively, to judge of their characters by their faces; ability to act with force and precision; a masterful knowledge of the subject matter itself; an extreme caution; and above all the instinct to discover the weak point in the witness under examination."

PERSONALITY

While it is important to search for unusual factors in our analytical data, it is not the isolated event that matters so much as the integrated results of all factors contributing to form the personality, a term describing adequately for clinical purposes, if not exactly, the qualities or assemblage of qualities that make a person unique, an organism distinct from all others. The *persona* or mask anciently worn by actors varied according to the character assumed by the player, hence the mask symbolizes the mode of action sustained on the stage of life. Histrionically it shows chiefly the tragic or the comic side of the person's character, while popularly we qualify the individual by such terms as pleasing, unsympathetic, aggressive, submissive and the like. In a metaphysical sense, personality has been defined as the living, spiritual unity of the past, present and future; as a fact at the apex of the hierarchy of the entities of science; a unity associated with religion, art, literature, ethics, politics and philosophy; not a thing but a value like goodness and beauty and truth. Yet such an ideal is of less interest in its practical application than the conception of personality as a thoroughly objective, clinical entity, founded upon and conformable to the organism itself.

TYPES OF RECORD

What are the relevant factors and events in the rise and development of the personality? What relations do they bear to one

⁴ Wellman, *The Art of Cross-examination*, New York, 1920.

another, to individual episodes and to social situations? These questions afford a rational approach to the field of Social Medicine.

I. Aside from circumstances connected with the immediate, clinical situation, medical case-histories usually are wanting in other personal details indispensable for thorough analyses of conduct. Likewise the records of administrative agencies often are simple reports of economic errands. Recording the subject's anamnesis generally is a mere clerical duty. The time at the disposal of the scientific specialist or of the social administrator is held to be too valuable for such subordinate tasks. Details of this nature usually are left to assistants, for whose guidance some one formulates a simple questionnaire covering the ordinary situation. Such a document purports to impart an air of completeness to the special examination or to the welfare record. Frequently the result is found to be little more than an exercise in the dextrous use of plus and minus symbols, the responsibility of recording the patient's history gradually deteriorating into a perfunctory duty, missing the unusual elements and obscuring the real issue.

II. Superior to automatic methods yet not scientifically adequate, is the unsystematized record of the so-called trained observer, sometimes disorderly and careless in arrangement of details. The data of hospitals, bureaus, schools, and other community agencies have a broader function than mere ministration to the immediate problem from which they arose. Their permanent social value for reference is inexcusably limited when no systematic plan is followed. Data so incomplete are as inaccessible as a book without an index.

For historical-analytical purposes neither of the foregoing pretences is effective since one discourages the development of original points of view, failing to exhume unusual features, while the other neglects to emphasize a rational, systematic scheme, although it may contain, here and there, most of the data required.

III. A plan appearing to produce better results adopts a uniform case-record within which epochal events of analytical significance to the personality are arranged in the biological and social order of their development. As will appear upon further consideration these events group themselves under natural divisions, each of which designates a broad, biological principle suggestive of the trend the observer should follow in pursuing his theme. The methodology

of such a case-record is herewith presented as the approach to the more formal structure of Social Medicine in all its branches.

QUALITATIVE VS. QUANTITATIVE METHODS

"So long as only qualitative methods (verbal portraiture) are used in a branch of science," says Arrhenius,⁵ "this cannot rise to a higher stage than a descriptive one. Our knowledge is then limited, although it may be very useful." Scientific studies of the personality should tend, therefore, toward mathematical precision, a somewhat distant though not forlorn hope. "Insanity," for example, "malnutrition" and "feeble-mindedness," terms whose inexactness incites legal controversy; estimations of basal metabolism; rates at which the body rids itself of infection, and various other physiological and epidemiological phenomena are now capable of more nearly exact numerical definition. Employment, expenditures, and the distribution of wealth, although placed long since upon a loose quantitative basis, now are measurable in more definite terms with greater justice to dependent and semi-dependent people needing social aid.

Not yet, however, are we able to evaluate "character" with the exactness attributed to the measurement of "intelligence" by means of tests. Nevertheless a clearer conception of the biological significance of feeling, desire, control, interest, attitude, mood, sentiment, and other elements of human behavior has developed and with it an ability to analyze conduct and to organize it according to scientific principles. We are beginning to think of our playgrounds, school rooms, factories, courts, and prisons as laboratories with unlimited opportunities for observing the human organism with its inherent possibilities of evolving higher cultural ideals and creative types. No instrument is of greater service in furthering such hopes than a complete case-record.

L'HYGIENE PREVENTIVE

Regular employment and fair wages; adequate and cheap food; better housing and suitable recreation; liquor and narcotic control; social insurance and health protection, are some of the outward manifestations needing study and legislation. Data must come from

⁵ Arrhenius, Svante, *Quant. Laws in Biological Chemistry*, London, 1915.

the case-history, giving a reliable, complete and clear picture of the personality. We know what *we* think of the delinquent but we must know what *he* thinks of us. The day has passed when legislators must be confronted with the exhumed evidence of the lash in order to arouse their lethargic indignation. Even "politicians" now recognize the greater value as vote-getters of accurate statistical data secured from educational, vocational and penal surveys, and today such results do not consist of stereotyped, moral abstractions but of direct observations of fundamental tendencies, racial, organic and social, as they appear in new family connections, from alien diffusion, and from varying surroundings.

OBSERVER'S ORIGINALITY

In general the case-record is built up of various themes or topics arranged consecutively in the order of the biological and social development of the human organism. Each theme is directed toward the discovery of fundamental elements of behavior whose tendencies are at the base of conduct. Instead of recording a negative symbol against the question of "honesty," as in the first type of case-record, the observer under the present plan attempts rather to discover the dynamic motives in such unusual acts as lying, cheating, stealing, forgery and acquisitive or other tendencies, whose fundamental factors reach back to such affective elements as anger and fear. Here our underlying reason for stressing material rather than ethical aspects is the impression that it is more nearly just to the individual to characterize him by what he *is* than by what he *does*, i.e., by his inmost thoughts and feelings than by his external appearances. While each heading suggests to the interrogator the general theme, such as ancestry, school achievement, interests, etc., it leaves to his ability and insight the individual mode to be employed in securing the evidence, which should be recorded so far as possible in the exact phraseology of the subject himself. Thus the value of a rational plan of observation is emphasized while at the same time opportunity is given the observer to demonstrate his or her originality. Although the less highly trained worker naturally is handicapped, this plan enables anyone to obtain a more nearly individual record than under the questionnaire method. The themes, also, suggested for amplification, while having a scientific function, show in addition entirely practical applications. The pedigree chart, for

example, offers the basis for a consideration of heredity and development, in the differentiation of whose factors lies the important analytical truth about mental defect and its transmissibility, but this figure leads also to a ready visualization of the family circle.

DATA AND DOMAINS

Data are propositions, known without demonstration to be true, used as premises in proving other propositions. In a developed science their mere appearance affords the careful observer reasons for assuming further scientific conclusions in that field. As pointed out by Cardozo¹ in explaining the growth of the judicial process from precedent to precedent, "the implications of a decision may in the beginning be ambiguous. New cases by commentary and exposition extract the essence. At last there emerges a rule or principle which becomes a datum, a point of departure, from which new lines will run, from which new courses will be measured."

"There are three things," said Aristotle,⁶ "which make men good and virtuous: nature, habit and reason. In the first place everyone must be born a man and not some other animal." Having in mind such basic factors, the simplest analysis of human events thus resolves itself into several domains or provinces, each furnishing data for social criteria.

Logically and clinically first is this field of our "nature" or being. Incidents here relate to innate factors, to an inexorable environment, at its best physically ideal but socially often problematic. Although we have no hand in choosing the hereditary elements of our being or nature, and no one knows whether or not they are plastic, or even harmoniously constituted, yet we are called upon to integrate them according to traditional standards. Our early reactions to this situation largely are involuntary, behavioristic phenomena. Generally they are voluntarily conditioned or modified, sooner or later in life, to conform to standard social surroundings or to anti-social schemes.

The latest instinctive acquisition of the human organism, the herd or gregarious impulse, furnishes the conditioning stimuli for the development of social control or organization of our primitive or animal impulses. Thus we learn to curb fear when in the presence

⁶ Aristotle, *Politics*, tr., Jowett, Oxford, 1905.

of danger, yet at the same time to show enough solicitude for protective purposes; we come to avoid over-aggressiveness, yet aim to possess sufficient self-assertion to maintain our legitimate rights.

Childhood and youth have become largely parasitic under culture, too much of life's business being to follow traditional paths, and coercion is the rule if not the law. Although in recent years the child has been eased, theoretically, of the *patria potestas*, an authority making possible domestic despotism, and youth more than ever contemplates the conquest of unexplored regions, its actual participation in the group still is very limited. One's history from conception to adolescence is a series of official observations mostly in the nature of *Personal* or *Possessive Data*.

As the individual develops a capacity voluntarily to respond to his surroundings, to exercise his ability to survive, to direct analytically his power of control, he utilizes various higher processes of learning such as associative ability, analysis, judgment and insight. At the close of the adolescent stage of physical growth the analytical nervous mechanism is completely developed structurally. Its general responsive capacity may be estimated and compared with recognized standards. Upon the degree of this reactive ability depends largely the range of voluntary control or social organization of the various factors of the personality. The field of thought, learning and insight may hold important factors for our analysis and the *Psychological* or *Mental Data*, therefore, are of special significance in the case-record.

In the course of its evolution the human organism has appropriated various systems of mechanisms or organs from other species. These have become integrated or welded together into a concordant whole—the "body." When these systems operate in unison the organism is said to be in "health." With a being so complex as man, attempting such a diversity of environments, it is clear that delicately adjusted instruments must suffer frequent disorganization or "illness." Readjustment generally follows, the organ's possessor being unaware of the change or as ordinarily happens being stimulated to action through pain or discomfort. Sometimes the situation produces a modification of the organ or of its function, while at other times repairs are made without change. Episodes of physical disorganization, therefore, may mark important epochs in the development of character and in the history of conduct. Upon them

may depend unusual interpretations of the personality. *Physical Data*, or the results of the medical examination, consequently form our third analytical domain.

During the early part of the last century biology tended to over-emphasize the importance of environment as the determining factor in the progressive development of organic species. Similarly, until recently, was heredity overstressed. A clearer conception of the causes and effects of variations in organisms is now inducing a more sympathetic attitude toward the consideration of unusual traits and their relation to heredity and development. Cultural values are found to depend upon both ancestry and environment. Surroundings in the light of their biological relations constitute a fourth domain, comprehended under the heading *Social Data*.

Personal, psychological, physical and social fields thus contribute more or less equally to all intensive and analytical studies of the individual. In each domain a number of themes logically present themselves. The general nature of these topics now may be expanded more fully as a guide to systematic observation.

DATA OF IDENTIFICATION

Each record should bear the case-number, while the face-sheet should be prefaced with the Christian name and surname of the subject or individual under observation; the place of abode; the date and the source of our official information. Further items of importance in identification are: the maiden name of the mother, the full name of the father; their birthplace; their status as citizens, their bondsman on entry, if aliens, and their civic intentions; date of emigration and immigration; date and place of marriage; literacy or ability to read and write; voting status and present name if remarried. In special cases small photographs, front and side views, and regulation finger prints are included at this point.

RACE, NATIVITY AND NATIONALITY

Race signifies a distinct, ethnic stock—Caucasian, Mongolian, African, classified mainly by appearance, the most generally observed quality of which is color. Five groups form the broadest anthropological arrangement: white, yellow, black, brown and red. More

extensive racial details, according to the purpose of the record, may be added.

Nativity describes the domicile or home, the birthplace, while nationality refers more specifically to political divisions—English, French, German, Italian, Hebrew, American, groups differing from each other in specific social policies.

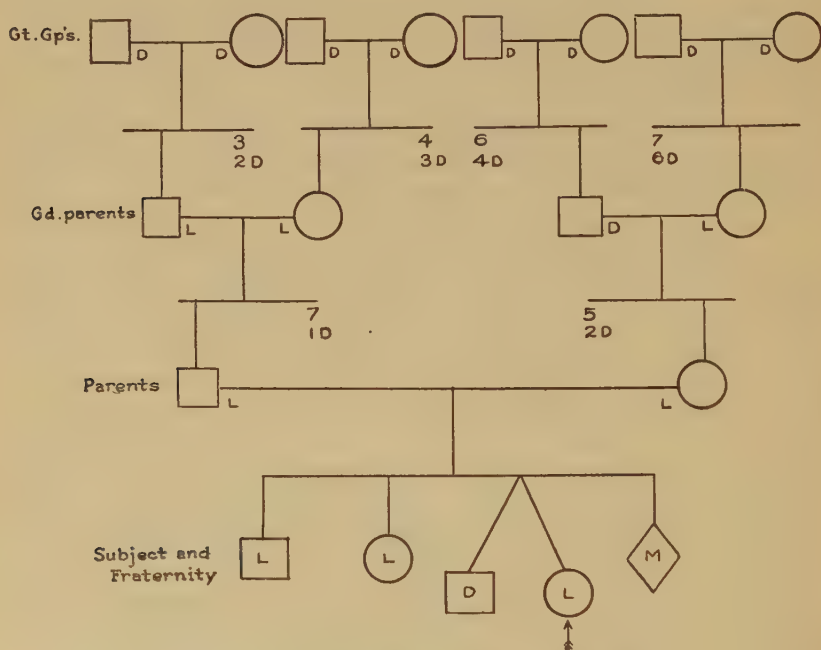


FIG. 1. CHART SHOWING SIMPLE SITUATION

PEDIGREE CHART

Lineage as well as family and household may be visualized most satisfactorily by constructing a diagram or chart showing the lineal and chronological relation of all members of the immediate group. This graphic representation of the subject's remote and recent kin may convey much abbreviated and condensed personal information.

In this chart the earlier generations are placed above, the later below. Rectangular figures symbolize males, circles symbolize females, diamonds or lozenge-shaped figures indicate uncertainty as

to sex. The ancient chemical symbol for iron and Mars (σ), sometimes is used to represent the male and the symbol for copper or Venus (φ) the female. Members of the fraternity or immediate family are connected by horizontal lines lying above the symbols, while vertical lines connect parents and offspring. Complex family

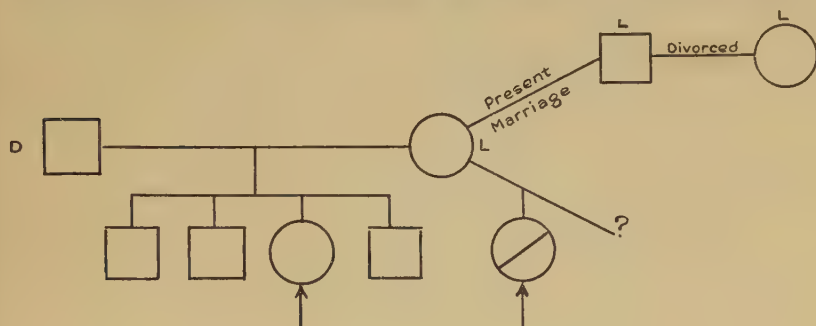


FIG. 2

A divorced man with no children married a widow with three boys and two girls, the youngest girl being illegitimate. The third and fifth were girls and were the subjects of the examination.

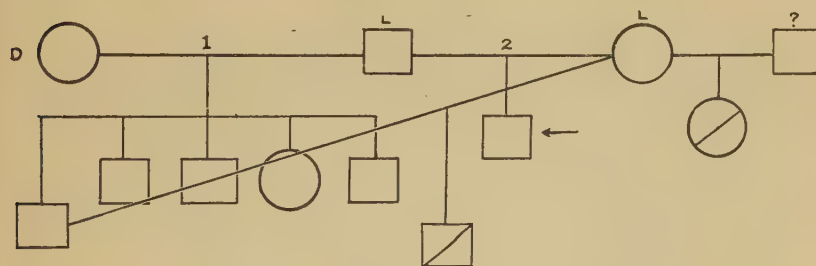


FIG. 3

A widower with five children, the fourth a girl, married a woman with an illegitimate daughter. They had one boy and the woman, later, bore an illegitimate boy to her eldest stepson, whose mother is the only member of the group not living.

relations require for their expression ingenuity in draughtsmanship, less confusing if logical kinships are recognized and chronological factors recalled. A number of illustrative examples are here introduced. Figure 1 represents a simple situation. Figures 2, 3 and 4 show involved relationships.

Information prior to the third and fourth generations usually is unreliable and difficult to verify without extensive investigation. In the routine record, as a rule it is unnecessary, except in the case of the last generation, to record in detail the entire family sequence. Items of importance are: the number of those living and of those dead; cause of death; important social relations; economic efficiency in relation to health, character and intelligence; names of relatives who might assume responsibility in the present situation. The

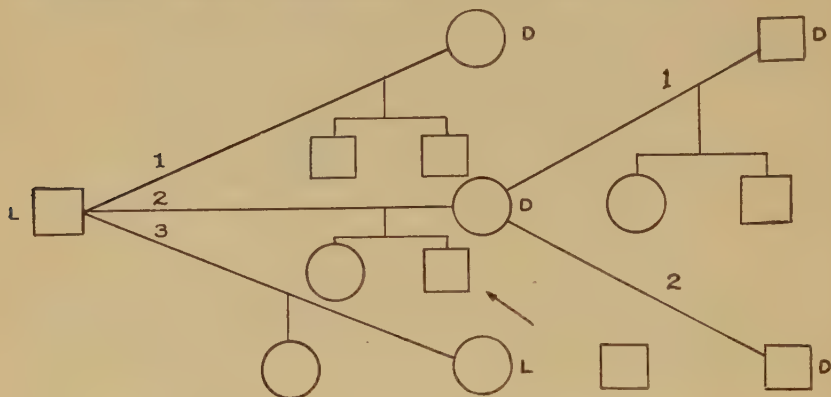


FIG. 4

A man, married three times and twice a widower, brought for examination a son by his second wife who had been twice widowed, with two children by the first marriage and one by the second. The man's own family consisted of two boys by the first marriage, a boy and a girl by the second, and a girl by the third.

subject's immediate family, however, should be given in full detail. A useful method of abbreviating the clinical data of analytical importance is seen in figure 5.

Indicate:	Symbols, Abbreviations and Charts	By
Subject of case-history.....	* or	↑
Male.....		□
Female.....		○
Sex unknown.....		◇
Illegitimate (bar crosses symbol).....	☒	⊗
Twins.....		Λ
Premature.....		M or StB
Alcoholism.....		A
Tuberculosis.....		Tb
Syphilis.....		S

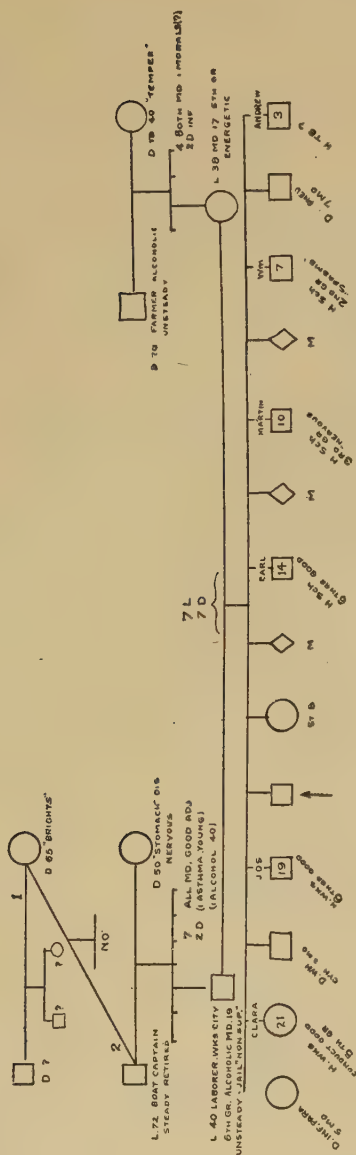


FIG. 5. CHART SHOWING METHOD OF ABBREVIATING SOCIAL DATA

Physical handicap (sickly, cripple).....	PH
Epileptic.....	E
Feeble-minded.....	FM
"Insane".....	I
Character handicap (poor balance).....	CH
Vagrancy.....	V
Delinquency.....	D
etc.	

With remarriage and the incidence of mixed offspring the group occupying the center of the chart always should be the one containing the subject of the history.

REMOTE VITAL STATISTICS

In recording the official causes of death among ancestry a definite nomenclature should be followed and age stated. Some of the diseases of statistical and personal relation are:

- Tuberculosis (specify part and organ)
- Cancer
- Syphilis
- Diabetes
- Rheumatism
- Alcoholism, acute and chronic
- Paralysis (stroke, apoplexy)
- Diseases of heart or blood vessels
- Bronchitis and pneumonia
- Asthma (often tuberculosis)
- Nephritis ("Bright's")
- Childbirth, disorders of
- Old age, disorders of
- Surgical diseases and operations

Other reportable phenomena relate to:

- Suicide, homicide
- "Insanity" (depressions, excitements, anxieties)
- "Epilepsy"
- Migraine or neuralgia
- Nervous breakdown
- Cripplehood
- Blindness
- Deafness
- Veneral disease
- Lead or other industrial poisoning (painters, dyers, etc.)

Drug addiction
Spasms or fits
"St. Vitus's dance" (chorea)
Tics (habit spasms)
Fugues (irresponsible wanderings)
Rickets and nutritional disorders
Endocrine disturbance (cretinism, giantism, infantilism, Mongolian idiocy)
Unbalanced personality and temperamental peculiarities

The remote history primarily concerns itself to a slight extent only with the infectious diseases of childhood. Nevertheless their unusual features having a bearing on the family line need to be recorded. Such, for example, are the severe manifestations of scarlet fever and its sequelae.

REMOTE SOCIAL DATA

The relation of ancestral tendencies to social forces is seen in disorganized *nutritive* conditions—sickness, poverty, malnutrition, the narcotic impulse, destitution, inadequate housing and unemployment. Disorganized *reproductive* capacity helps to cause illegitimacy, divorce, sex irregularities, thoughtless fecundity, marital incompatibility, vagrancy, delinquency and crime. Uncontrolled feelings, as disorganized *defence* tendencies, lead to traits characterized as selfishness, laziness, acquisitiveness, seclusiveness, excitability and, in short, social irresponsibility.

Presence of these various causes and conditions should be noted in an abbreviated form on the pedigree chart. They relate to the subject's *remote* history, to the line of individuals preceding his family and contain the story of the ancestral germplasm's capacity, stability and viability, together with a prediction of the expectancy of age, reproductive capacity and quality of offspring.

IMMEDIATE MEDICAL AND SOCIAL DATA

Yet these various medical and social features apply with even greater emphasis to the subject's parents and immediate fraternity and are to be noted here also. Moreover, in the last generation recorded, attention should be paid to the result of *each* pregnancy; its duration (premature or full term); character of delivery whether precipitate, instrumental or unduly prolonged; the child's condition

at birth; the exact successional relation of pregnancies to each other and especially to dead or immature offspring. The relation of miscarriages and still-births to the subject is specially important from the standpoint of development, the results of which are contrasted with hereditary factors in our final analysis of the personality. It is well to summarize in a word or a formula the public school attainment, the community estimate, the health and the social attainment of each living sib (brother or sister) together with the name and date of birth.

PRENATAL FACTORS, BIRTH (DATE) AND EARLY DEVELOPMENT

Stages of development beginning with maternal impregnation and ending with the appearance of a definite recognition of social responsibility at five years, the kindergarten or public school age, represents the third topic for investigation in the Personal field. This includes as the first stage the period ending in birth; as the second stage the period generally spoken of as infancy, extending to the chronological age of two years, and the third stage (two to five) comprising the first quarter of childhood or puberty (ending at fourteen years in boys and twelve years in girls). An important feature of the prebirth period is the quality of environment furnished by the mother in her capacity as host and the adequacy of nutriment appropriated, without alternative, by the human embryo in its parasitic relation. Is there evidence that the maternal nidus or uterus afforded adequate nurture? Was its functional integrity and organic health impaired by pathogenic organisms or their products, or by an excess or a deficiency of physiological activities? Disorganization of the former type is seen as a result of venereal infection and of the latter in conditions of disorganized metabolism and in other unbalanced emotional states showing themselves socially in episodes of rage, terror, and anxiety. Obviously, diseased tissues offer a poor environment for the developing egg, and the maternal blood stream, vitiated by noxious substances or overworked physiologically, is inadequate to nourish a structure so sensitive to change as the microscopic ovum. Social incompetence in meeting adult situations thus may be traced back to early developmental anomalies whose biological significance we leave for later consideration.

Artificial delivery sometimes is the starting point for structural anomalies in the intracranial mechanisms, although it is doubtful if in the main there is any direct relation between pressure from prolonged labor or from instrumental trauma and mental incapacity. Data on this subject are required.

Birth-place and date, verified by official reports (Health Officer) must be noted carefully since the individual's exact age often is called into question. In place of the birth-certificate, a passport in the case of aliens generally is utilized and even "bible records" or other casual data may be considered, especially if the information appears to be confirmed by a physical examination of physiological development (eruption of teeth, growth of hair over face, pubic region and in axillae; growth of bones of extremities, shown by x-ray, etc.).

Under this topic likewise should be recorded the method of feeding, whether natural or artificial, peculiar characteristics relating to nourishment in infancy; age when first the child walked, and any unusual features accompanying predominant use of right or left hand; age when first the child talked and unusual features of speech; age at eruption of teeth and digestive or other phenomena accompanying; order of the appearance of teeth; first manifestations of libido or instinctive, appetitive tendency—generally at this age in respect of food only, but sometimes of precocious reproductive demands; tendencies showing excess or deficiency in muscular activities (over or under-active); and any other unusual manifestations of behavior or involuntary habits relating to early development.

INSTINCTIVE, AFFECTIVE, AND EMOTIONAL TENDENCIES (APPETITES AND FEELINGS)

No domain of the personality contributes so fully to an historical-analytical study of conduct as that dealing with the mode and time of development of the feelings and appetites of the organism, whose ability to recognize the selfish tendencies of wants and interests and to control them according to the standard of the environment marks the transitional stage in social development from the brute to the human type. Progress in the study of society is shown by our willingness now to recognize in "criminal motives," "immoral conduct" and "unbalanced character," fundamental tendencies that also enter

into the formation of "honesty," "chastity" and "stability," the difference being that in the first group fundamental tendencies are *disorganized*—from incapacity oftener than from disease—while in the second group they are *organized* according to prevailing social standards.

As instinctive phenomena, the foundations of character depend upon hereditary and developmental factors showing a rational process of growth and regular stages of development under stable conditions. In order to estimate the results to be anticipated from training one should know as much as possible about the origin of the qualities to be trained. Our first effort is to determine the degree of stability underlying the subject's character, based as this is upon the involuntary nervous system and intimately connected as it is with the functional activities of the endocrine glands and other physiological mechanisms.

A poorly adjusted structure is suggested by the occurrence of convulsive phenomena such as "spasms," "fits" or "convulsions," tics or habitual muscular twitchings, chorea or "St. Vitus's dance," "epilepsy" and its equivalent phenomena seen in emotional outbursts, spasms at teething or with "indigestion," "laughing and crying spells," night terrors, and various other evidences of easily stimulated and inadequately controlled mechanisms. Inability of the involuntary system to become conditioned or adjusted according to usual standards shows also an inadequate basis for conduct since its results bring the individual into social disfavor. Evidence of nervous maladjustment is found in such "neurotic" tendencies as enuresis (bed-wetting), noctambulism (sleep-walking), rolling out of bed during sleep (fundamental disorientation), stammering, autoerotism (masturbation), preference for refuse food, other voluntary and involuntary eccentricities in eating, obsessions relating to personal cleanliness, adult sexual reactions (as early as eight years) and other unbalanced biological tendencies.

Even more significant, because less usual, are oddities relating to self-preservation, protection and sensibility. Between his second and third years the individual begins to appreciate the rights of others. The herd, gregarious or social tendency emerges; conflicts arise—in the adult displayed in dreams with devious courses, though childhood's dreams usually are frank statements of desires and

interests; adjustments must be made or evaded; thought begins definitely to function as an analytical mechanism; the beginnings of responsibility ought distinctly to be apprehended. Here our aim is to discover the time and mode of development of forces characterized as anger, fear, wonder, disgust, egoism (positive or negative self-interest), joyousness or the spirit of physical vigor and play, together with other "feelings" or affective phenomena (often discussed as emotions). The relations of these elements of the personality to character and conduct are discussed at length hereafter. Developing from them are such complex secondary organizations as love and hate, called by Shand⁷ *sentiments*, of analytical importance in clinical studies. The social instinct shows a poor basis when organization or training must contend with frequent temper tantrums, violent fears, marked disregard for the rights of others and similar uncontrolled impulses or true *emotions*, exhibited at stages of development when the usual child has mastered such manifestations. When three or four years old, stable children, who previously may have shown such emotional outbursts, tend to develop control. At two years of age fear begins to function as a natural tendency, more or less in evidence till the dawn of adolescence. In juvenile runaways and thieves both fear and anger frequently are absent as necessary elements of character, elements which must be stimulated before a satisfactory organization can be effected.

After recording observations on the basis of character, its organization under training, either voluntary or involuntary, is to be considered, a process requiring the correlation of personal and social data. The tendency of affective impulses to develop *attitudes* and *emotions* will be considered later when sentiments are discussed.

SICKNESS, ACCIDENTS, "NERVOUSNESS" AND GENERAL HEALTH

Next to be considered, from their relation to development, are sickness and injury. Convulsive phenomena and signs of innutrition first may be recorded, with any evidence of paralysis and a careful correlation of bodily appearance with family characteristics such

⁷ Shand, A. F., *The Foundations of Character*, London, 1914.

as obesity, dwarfism and the like. We should inquire as to the occurrence of:

- Measles
- Whooping cough
- Mumps
- Chicken pox
- Scarlet fever
- Diphtheria
- Typhoid fever
- Pneumonia
- Bronchitis
- Frequent colds
- Malaria
- Rheumatism (growing pains)
- Venereal disease (vaginal smear from all problem girls, no matter how young)
- Middle-ear-disease (running ears)
- Tonsillitis (sore throat)
- Headache
- Constipation
- Migraine or neuralgia
- Nervous breakdown

and other less usual infections, accidents, and physical disturbances including surgical diseases and their operative treatment. Record also the results of acquired immunity from disease or from vaccination against smallpox, typhoid fever, diphtheria or other communicable conditions, and compliance with religious observances such as circumcision. It is important to have data concerning the age of reproductive maturity, its regularity and any accompanying physical discomfort. Data under the preceding heading should follow, as nearly as possible, a chronological sequence.

SCHOOL HISTORY

Our first official contact with the relentless, social engine assigned by the community to the task of imparting traditions, dispassionately and mechanically, comes at the age of school entrance. Heretofore the individual's attitude toward others has been colored by the partiality of the restricted, family group. The responsibility of relying upon his own protective mechanisms, of being able to assert his qualities of leadership, now is given its first opportunity toward expression. Data here relate to: Age at entering and leaving school;

number of years in each grade; regularity of attendance, truancy and, in general, traits of behavior rather than of conduct, the latter coming under Social Data. A concise way of showing this information might utilize a fractional method.

Grade /years; $\frac{1}{1}$, $\frac{2}{1}$, $\frac{3}{2}$, $\frac{4}{3}$, etc.

Regularity of attendance generally is a measure of home coöperation. Habitual truancy, incorrigibility and other predelinquent traits should be recorded only after thorough investigation.

APTITUDES AND INTERESTS

As a final contribution to our estimate of the assets and liabilities of the personality we may record observations of the individual's special ability in meeting specific situations and indications of his other interests, especially as they relate to domestic, educational, vocational, professional or economic subjects.

PSYCHOLOGICAL DATA

Ability to interpret adequately one's appetites and feelings as well as to apprehend experiences heard, seen, tasted and felt in one's external surroundings; to recall them, to associate them, to analyze them and to judge of their fitness for successful service, and finally to develop and exercise control or will in selecting those of greatest social utility—this dominant task, a consummation of human development, rests with the voluntary nervous system. Such capacity constitutes intelligence, i.e., quickness in seeing things as they are, degrees of which may be estimated and compared quantitatively by means of "intelligence tests." Psychological data thus collected may be still further analyzed for clues to *special* aptitudes and interests. Specific traits thus discovered may then be submitted to more refined methods of examination, testing such peculiar abilities as special ways of learning, unusual spelling capacity, facility with numbers, proficiency in reading, aptitude for drawing, mechanical ingenuity, musical skill and other accomplishments.

Concerning the special technic of this field attention may be called to two types of "mental test" used in estimating *general* intelligence: I. Tests applied to each individual, the best stand-

ardized of which are The Binet-Simon, the Point Scale, and the Stanford Revision. II. Tests applied to groups (a more expeditious but less thorough procedure), such as the Army Alpha and Beta, the National Intelligence Test, the Otis Group Intelligence Scale and various others. Skilfully applied, each of these, in its field, gives successful clinical results.

Special abilities and disabilities may be analyzed by means of a variety of instruments and methods developed from psychological and psychiatric observations. The Standard Form-Board is an example, whose basic idea is one of Seguin's contributions to the study and training of the mentally handicapped. Word-association tests are helpful by enabling us to work out the differences in various psychological types of personality and also as "complex" indicators. The Stenquist mechanical test determines constructive skill. Special tests in reading, writing, in the use of numbers, in spelling, drawing and in language also are available.

To those interpreting psychological observations a number of clinical suggestions may be offered. Of fundamental importance, for example, is a control group in every comparative study of mental phenomena. Estimates of the number of "feeble-minded" in institutions must be compared with estimates of similar groups in the community. "The supreme necessity in all social studies of unusual individuals is a parallel inquiry among relatively normal individuals."⁸ To state that there are certain percentages of this, that or the other group means nothing until we have assessed the frequency of the condition among those in the community who appear to be satisfying the social standards of their surroundings.

Again, fantastic interpretations to which the results of "mental tests" have been subjected in attempts to make them demonstrate a low level of intelligence, suggesting the futility of carrying forward a far-reaching program of popular education, are unwarranted. The horror sometimes produced by social reformers who emphasize a mental age of thirteen—the average intellectual level attributed to our white population—as if they were comparing it with an attainable intelligence of the usual person at forty, would be considerably mitigated by an accompanying explanation that normal mental capacity, according to the tests commonly in use, has a maximum

⁸ Burt, Cyril, Causal Factors of Juvenile Crime, Brit. Jour. Med. Psychol., Vol. III, Part I, p. 1, 1923.

rating of essentially sixteen years only. Expressed as a proportion our scheme should read: Intelligence of Subject (mentality of thirteen years) is to person of normal intelligence as 13 is to 16, which after all is not hopeless for education.

Individuals whose chronological age is less than 16 years but whose mental examination shows inferiority need not on this account suffer from the slogan of the propagandist: "Once feeble-minded, always feeble-minded." This superficial point of view pays little heed to the developmental aspects of mental retardation. Under improved surroundings mentally inferior children often develop a marked increase in mental capacity, sometimes reaching superior attainment.

To the clinical observer mental tests afford an unusual opportunity for establishing a closer rapport with the subject of the examination. Thus it is possible for the worker trained in medicine and in psychology to study the *general* behavior of the individual, with integrative insight. Moreover, it should be borne in mind that a psychological analysis of the personality is more than a "mental testing." Psychology, rather, is the microscope through which to view the subject's *introspective phenomena*—his own account of his mental activities—and subject them to scientific scrutiny. Each reaction to a specific situation or test should be examined from the standpoint of its fundamental elements. For although it is manifestly impossible to isolate such a process as memory, for example, and measure it by itself apart from related phenomena, still we may question whether its predominant trend favors visual stimuli or auditory, i.e., whether it is easier to remember things seen or those heard.

Data in the psychological domain of Social Medicine should include a statement of the chronological age expressed in terms of half-years at least; the general mental capacity estimated by standard tests, and the Intelligence Quotient or Intelligence Coefficient, for statistical and classificatory use. This decimal expresses the ratio existing between actual or chronological age and so-called Mental Age as determined by the tests,—the I.C. expressing a similar relation using the subject's score in points successfully passed and the number expected at his actual age as terms of the ratio, i.e., actual accomplishment is to expected accomplishment as the I.C. is to one-hundred. Special abilities and disabilities, aptitudes and interests as suggested by the examination should be summarized for use in the social synthesis.

PHYSICAL DATA

Popular tradition always has tried to disengage the mind and the body, basing its contention on the widely divergent functions of their organic systems as well as upon the spiritual attributes of the one and the animal propensities of the other. As the most remarkable result of organic integration through which many simpler nervous mechanisms evolved from primitive surroundings have become welded together, the human brain nevertheless shows very clearly its ancestral relationship to structures primarily nutritive in function. So intimate is this connection that phenomena connected with the satisfaction of hunger influence more profoundly than all other factors the entire personality, causing, for example, a misinterpretation of reactions apparently stimulated by the gastrointestinal system of organs yet in reality fundamentally psychic.

An analysis of the personality, therefore, must have at its disposal an accurate summary of the functional capacity and reactive qualities of each organic system composing the body unit whose significant features and their mental correlations are more fully discussed hereafter. The *physical data* called for by this record manifestly are little more than suggestive inasmuch as their function is not directed to therapeutic results primarily but only as the latter are useful in interpreting behavior and conduct. From the standpoint of health in its relations to pathology and pharmacology one must consult the narrower and more specific *general* medical history.

Since physical data are observed mainly as the function of General Medicine, our record in this field should begin with such anthropological details as body weight, stature, sitting height (stem length), span (arms extended, sidewise), chest circumference, head circumference, Cephalic Index, bodily appearance and gait. Mood and social attitude also may be noted here. Anomalies in the contour of the ears, head and extremities are to be observed, although individually such peculiarities are not stigmata and are of little moment in the formulation of so-called criminal types or diatheses.

Although the stage of development of the axillary, pubic, and facial hair may be noted as a biological factor having at least a racial significance, its value as a determiner of chronological age is not conclusive. While the presence of well developed hair of charac-

teristic texture indicates in some cases an advanced stage of adolescence or physiological maturity, in others it indicates merely racial or glandular peculiarities exhibiting themselves irrespective of age.

Observation of sensory tendencies and their relations to pathological conditions of the teeth, nose and throat must be weighed more carefully in studies of the personality than is customary in general medicine. Errors of refraction, for example, of little consequence in the visual reaction of the well balanced person may be the very root of disorganization in neurotic individuals. Data relating to voluntary sensory experiences—taste, hearing, vision, touch or feeling and pressure—phenomena whose integration plays an important part in the personality, should summarize the functional condition of vision and hearing especially and should state whether or not artificial aid has been utilized. The acquisition of knowledge by means other than that furnished by the ordinary channels of sense may even involve discussing “second sight,” hypnotism and other psychic phenomena. A statement of exact pathological conditions should be left to the specialist. However, evidence of middle-ear disease (“running ears”) or of congenital word blindness, a defect characterized by great disability in learning to read by ordinary methods, is often brought first to the attention by the case-worker.

No general summary of the structural condition of the nervous system is adequate for synthetic purposes unless it notes at least the following features as an indication of the integrity of the sensory and motor nervous centers:

- a.* Character of pupils (appearance, response to stimuli)
- b.* Quality of speech (manner, speed, clearness, pitch)
- c.* Occurrence of tremors (tongue and extremities)
- d.* Character of gait
- e.* Response of plantar reflex (abnormality is physiological in infancy)
- f.* Response of patellar reflex
- g.* Biochemical findings of blood and spinal fluid

The neurologist brings out other distinctions, but those here suggested are imperative even for a superficial estimate.

Soundness in thinking, judging and acting with sufficient responsibility to get on in the community are established by the

psychiatric examination. The subject's capacity to respond in coherent fashion approximately measures his right to complete freedom; his need of supervision while still at large; or his complete custodial care. The mental derangement of a "crazy," "mad" or psychotic person may be due to temporary or to permanent nervous disorganization or to permanent mental deterioration. The subject of a manic-depressive psychosis (mania and melancholia) may be completely and permanently irresponsible, or on the other hand he may regain his responsibility. In either case custodial care must be utilized. The subject of paresis (general paralysis) a syphilitic deterioration, is injured permanently, even though treatment may restore partial responsibility. Here, also the subject passes through a stage of social irresponsibility too marked to go unnoticed. The person suffering from a psychoneurosis, e.g., hysteria, while socially responsible, still has certain peculiarities interfering with the rights of those associated with him, i.e., he may forget his name and, wandering away, be unable to return home; he may lose voluntary control of his appetites and feelings and yet be answerable for most of his social relations. All impediments in nervous organization so great as to suggest social irresponsibility are the legitimate object of psychiatry.

Obstructive adenoid growths interfering with breathing and speaking, irritated tonsils inviting infection and impairing hearing, enlarged lymphatic glands of the neck, all suggest operative treatment. Tonsillar hypertrophy in general, however, is to be interpreted conservatively so far as concerns removal. Mental defect rarely bears a direct relation to these conditions, for it is generally an accompanying phenomenon, not a result. Rheumatism, tuberculosis and chorea, on the other hand, show a decided correlation with pharyngeal and nasal obstructions.

Sometimes the structural and functional evidence furnished by the endocrine glands is sufficiently clear to justify definite conclusions about these complex organs. While the thyroid gland, frequently so enlarged so as to permit palpation, has been more closely studied than the others, the pituitary body, from radiosopic examination, has been found to bear definite relations to such conditions as gigantism, dwarfism, obesity and the phenomena of metabolism, and the adrenal bodies have shown specific, physiological characteristics. Undoubtedly the general form and the external appearance of the

body depend to a large extent upon the functioning, during the early developmental period, of this entire system of glands whose capricious effect on the personality is known to be profoundly significant yet whose individual relationship is as yet inadequately understood. Exophthalmic (protruding eyes) and simple goitre, cretinism, disorganized metabolic and affective states and other behavioristic phenomena are observed in connection with this organic system.

The color and quality of the skin is important as an index of personal hygiene as well as of nutritional, glandular and nervous relations, examples of which are seen in the herpetic lips, "chapped hands" and "chilblains" concurrent with "nervousness" and to acne of the face in precocious and adolescent individuals. Scars and tattoo marks, sores (possibly tuberculous or syphilitic), disturbances in metabolism such as are seen in chronic eczema and pelagra, parasitic and verminous conditions show the intimate relation of the skin to the personality.

The quality, number and developmental anomalies of the teeth, including overdue yet unerupted buds; the course of growth and its interruption by such pathological conditions as rickets and syphilis; the possible relation of caries to an abnormal endocrine condition; the need of encouraging better alignment by assisting mechanically the development of the hard palate and related structures, all are features of the examination quite as important to discover as dental decay, whose remedy largely concerns dietetic hygiene.

Respiratory disorders (emphasizing radioscopic methods of examination), circulatory difficulties (stressing the importance of differentiating pathological and developmental or functional defects), abdominal conditions, both medical and surgical—all constitute broad medical fields with important personal features. Each system should be summarized by the professional examiner whose analysis is to be recorded so far as it refers to any positive features of disease or phenomena intimately related to specific social situations.

Of equal significance is the condition of the genito-urinary system, to be considered from the standpoint of developmental characteristics, functional maturity (in females, regularity of cycle, discomfort or pain, precocity, etc.); venereal disease (recognizing the frequency and perilous results from undetected gonorrheal infection in young girls); degree of sexual excitability, unusual practices (perversions

from necessity or choice); integrity of secretory and excretory functions and their pathognomonic indications.

By means of radioscopic estimates of the degree of development of the small bones of the hands and feet the skeletal or osseous system furnishes important data as to chronological age. Further observations of this system concern its growth, nutrition, deformities, disharmony in growth periods (height and weight) and such anomalies as clubbed fingers, extra digits and unnatural curves of the spine with pain or discomfort in joints or bones from tuberculosis or other disease.

Correlated with a similar topic in the Social Data is the question of food, its nature and variety, its quality, quantity and efficiency in satisfying the individual's physiologic needs. "Food" here is used to designate air, light, water, proteins, fats, mineral constituents, carbohydrates and "protective foods" such as milk, eggs, fruit and leafy vegetables valuable for their vitamin content.

In order to guard against hasty and superficial estimates of "malnutrition" a term too frequently utilized to shelter ignorance or indolence, the Nutritional Index should be computed by one of the standard technical methods (e.g., Dreyer's⁹ tables assist in comparing the child's sitting height or stem length and also the chest circumference with the actual weight, disregarding chronological age).

Here also may be recorded habits relating to eating, such as frequency, moderation, regularity, specimen meals, together with personal idiosyncrasies.

Finally the individual's tendency to become fatigued, his resistance to disease (frequent colds, tonsillitis, headache, attacks of pain) and his reaction to various biological and other laboratory tests (Wassermann, Pirquet, Shick, Dick, etc.) should be recorded. Special complaints not included in the above list but emphasized by the subject may be underscored in the summary of the physical examination, and their authenticity investigated.

The summary of Physical Data should emphasize:

- a. Structural defects
- b. Functional defects
- c. Poor habits

⁹ Dreyer, Georges, *The Assessment of Physical Fitness*, London, 1920.

SOCIAL DATA

Thus far our analytical observations have been confined largely to the data of the laboratory and of the consulting room. Equally important in a synthetic reconstruction of a social problem is an account of the individual's surroundings and of his relations to society. This brings us to the fourth domain of our analytical study, a field presenting Social Data from observations of the functioning of the herd or gregarious instinct whose tendencies are measured by social tests, i.e., the way in which the individual meets community responsibilities.

A statement of the name of the informant should preface this investigation together with the title of the agency primarily interested, the motive promoting the inquiry, the name of the observer or case-worker, and the designations of all other agencies, bureaus and associations, philanthropic institutions, hospitals and individuals who have contributed to the subject's welfare in community relationships. Generally some of this information comes from the "Confidential Exchange."

Constituting the most important element in the external environment, the individual's home and the fixed abode of his family, if he has one, hold first place. As complete a survey as can be made by the trained worker, calling in if necessary public health authorities, is indicated and should include: an account of the locality, its geography or physical features, sanitary conditions, water supply, quality and quantity of the neighborhood, proximity to social centers (legitimate or illegitimate), educational, recreative, vocational and religious. The tenantable qualities of the house should be described together with its adequacy of rooms, lighting and air space, its cleanliness and suitability to the family needs, especially as these relate to food, bathing and sleep. Further topics include: the tendencies of the family and of the subject in relation to quality, quantity and time of meals; amount and character of rest and recreation and their relation to educational and vocational exigencies; general health of the family and of the neighborhood; property rights or rental obligations of the family; vocational and economic responsibilities of all members of the group; their social tendencies; their relations with one another and the general attitude toward parental authority; the language or tongue spoken in the home and the attitude of the

parents towards the preservation of traditional modes of culture and of the children towards acceptance of such habits.

Following a survey of the family hearth comes the question of its founders. Here facts tend to establish the subject's family rights, existence of the parents, nuptial or extranuptial character of birth; custodial status (ward, commitment, etc.), conjugal conditions (happy or turbulent), provisions for support; civic rights or alien responsibilities.

Fundamental social tendencies sometimes fail to reveal their true nature in the home but show themselves most clearly in the character of associates chosen. Seclusiveness, delinquency and perversions; unnatural femininity or virility; unsatisfied biological needs relating to physical attractiveness and bodily display, adornment, recreation and similar legitimate interests frequently furnish clues to the explanation of unusual modes of conduct.

Enumeration of the individuals composing the family circle, demands from and contributions of each to the weekly budget, their social and economic relationships, assistance from contributing agencies—benevolent or beneficial, represent the type of information desired for a financial estimate of the situation.

Most of the preceding data relate more definitely to the individual's contact with a limited group. His relationship to the community is of equal analytical importance. As cultural agencies the school and playground or recreational center offer the chief directing influence. The narrower outlook inherent in the home must now give place to a broader interpretation of selfish tendencies, an imaginative insight into the rights of others and a capacity to harmonize differences. It is our task to interpret instinctive reactions by means of social tests.

In the case of the child social tendencies are most freely shown to his teachers and recreational advisers, whose estimate should be correlated with their personal attitude and capacity for sound judgment. Various adult associates play the same rôle for the mature person. It is equally important, also, to secure the subject's point of view toward his critics and the situation in question. Our tendency to make ourselves a Grand Jury and hear but one side of the controversy is all too frequent.

A disregard of the subject's vocational history frequently leads to his still further casualization as a laborer. It is important to

have a systematic record of the individual's various places of employment, the term of service in each, wage paid, character of work, and reasons for leaving. The employer's estimate and his capacity to judge the person sympathetically should be brought into relation with each other and with the case-worker's impression of the situation. So far as possible the social and physical factors in relation to industrial hygiene should be investigated for their contribution to the vocational record.

The individual's reaction toward religious observances and organizations and his regularity of attendance upon church services, Sunday School, confessional or other formal devotional exercise may be noted. Likewise the extent of his participation in social, political, club or trade associations, the nature of his sociable qualities, the direction they take in bringing the subject into relation with others, together with like family traits, all need to be considered. Tendencies to disregard or to evade traditional or judicial customs and community usages already may have been suggested in the previous data. Actual episodes of transgression may emerge in habitual school truancy, pilfering experiences and running away from home, all of which are predelinquent manifestations. Gambling, stealing, vagabondage, prostitution and similar misdemeanors, are, to say the least, annoying to organized society and are delinquent acts. Murder, burglary, robbery, arson, assault and other major offences are crimes, punishable in order to protect the community as well as to "reform" or to segregate the offender. All such incidents, whether ending in civil apprehension and judicial consideration or in concealment are of analytical importance.

Neighborhood estimates of an individual or a situation must be taken into account, yet sifted from groundless rumors and from gossip designed to harm.

Finally there may be recorded from time to time observations, incidents and episodes in the behavior and conduct of the subject while under surveillance. Whether secured during the initial examination or at subsequent conferences all data should be separately considered and properly classified under appropriate headings, and should not be allowed to accumulate as unsystematized social history.

RECORD PLAN

Classification and care of records, although properly the task of an expert custodian, often falls to the lot of untrained assistants. Analyzing and transcribing systematically the notes of various observers, attending to the "follow-up work," filing and summarizing results are details whose completeness of organization often measures the efficiency of an agency.

The simplest Case-Record system should contain:

- I. Neatly transcribed records of observations and impressions from each of the four fields heretofore discussed, together with all correspondence and exhibits, arranged in a folder, all folders to be numbered in chronological order
- II. A card index arranged alphabetically, each card bearing a numerical reference to its folder
- III. A card index of special features for future reference or study, each card representing a feature and calling attention to the record number of the history containing that datum
- IV. A card index in the nature of a daily calendar calling attention to the day's appointments, to individuals and topics to be considered and checking up the subject's punctuality.
- V. A card summary of each case, for protection against loss of original records from fire.

Following customary methods of efficiency each field of inquiry should keep its record on paper of a special tint, thereby making identification easier. Thus in a voluminous record the consultant is able more readily to discover all social data, correspondence, etc., from its employment of white paper, the psychological field using a buff tint, the physical field having blue and the personal field grey paper. On each of these record sheets is printed the heading already suggested. All this material is enclosed in a card-board folder (distinguishing sex by different colors), upon which is written the subject's name in full and the record Index Number, e.g.,

Symes, Joseph A—————. No. 674.

The Direct Reference Card is self-explanatory, corresponding to the names and numbers on the folders.

The Topical Reference Card Index is intended to facilitate investigation of special topics, e.g.,

School Truants, —————. See ————— Symes 674, Jones 38.

The Follow-up System is merely a card calendar upon which are recorded for future reference appointments, treatments, dismissions and similar ordinances of the hospital, court, bureau or other agency interested.

Each observer will have his own method of formulating a Card Index Case Summary, to guard against loss of original records. With a highly abbreviated system concentration of extensive records is possible.

CHAPTER III

SOCIAL RELATIVITY

APPLICATION OF INORGANIC METHODS TO SOCIAL DATA

When estimating the technical value of inert substances exposed to unusual conditions, such for example as water in its decomposition by electricity, only such results are anticipated as are justified by the subjection of the elements to chemical criteria. Thus considered the formula H_2O does not permit the assumption that, under superior conditions, a larger proportion of oxygen than the symbol suggests might result from the reaction of the water and its unusual environment. In like manner the economic value of an individual may be judged by submitting his conduct to the scrutiny of social criteria in order to analyze his personality and estimate his cultural qualifications. When such a course is followed justice to the individual, utilization of his community worth, and his ethical happiness are more likely to be realized, and our knowledge of the quality of his surroundings leads us to predict the degree of adaptability to be expected. The term Social Relativity may be used to express the relation of capabilities to surroundings.

Discouragement is sure to follow when the standard of attainment expected is too high for the capacity of the subject, whose failure is attributed to ulterior causes instead of to personal inferiority. Such situations arise when dependent children are placed in homes disproportionately superior to the child's inferior personality. Or again when youth becomes "institutionalized" from social incapacity to meet an institutional standard higher than it can ever attain in the community.

FUNDAMENTAL QUESTIONS

Basis and organization—one answering the question: what does the individual bring as a foundation; the other: what have been his cultural opportunities—are the two topics here presented for consideration. Personal factors may be of hereditary or of developmental origin, the former more or less irrevocable, at least during the

family's immediate history; the latter supporting a hopeful view of the possibility of reestablishing in offspring a social value superior to that shown by the parents.

Culture or civilization according to current views rarely is the result of processes of evolution, whose scheme attributes the origination of organic species to modes of development from earlier forms. Instead, culture generally represents specific group practices disseminated through the action of diffusion¹ or borrowing, a procedure more in keeping with the volatile nature of society with its intolerance to orderly growth.

While we look to the individual's biological history to furnish data from which to predict his personal assets, his anthropological history ought to supply information upon the sources and standards of his training. Furthermore his ability to harmonize the various educational, vocational and other social regulators of society with his own tendencies and notions constitutes a special theme involving both anthropological and biological fields.

SOCIAL ORGANIZATION

Social organization refers specifically to the mutual relations of various individual and group habits, innate and acquired, arising from efforts to satisfy needs and meet interests. The relation of organization to such basic structures as the nervous system and the endocrine organs has already been discussed and may be mentioned here merely to emphasize its functional importance in the building of character from elemental tendencies like fear and anger, and its dependence as a cultural process upon the social standards prevailing in each community.

Motives of organization emerge when biologic mechanisms such as appetites and feelings, states of activity followed by pleasure and pain, assert themselves among individuals gathered together in groups. The fundamental forces of life already have become automatic and are beyond the need of cultural opportunities to ensure their functional permanency. The organism does not have to be taught its reproductive technique, its specific mode of feeding, or how to utilize its physiological functions most advantageously toward protecting itself. But when *social* tendencies begin to develop the group im-

¹ Lowie, R. H., *Primitive Society*, New York, 1920.

poses rigid conditions to regulate animal impulses according to prevailing standards adopted by the pack, the herd or the community. Taboos thus acquired result in a social attitude so potent as to impress even the hereditary mechanism itself. Witness for example the child's reserve toward sexual topics long prohibited in general conversation.

Comparatively few *cultural* influences, however, are deliberate enough to utilize the exact methods attributed to the development of our biological characteristics. Most social phenomena thus far submitted to society are mere folkways, too crude in origin and too narrowly disseminated to serve as permanent acquisitions in the sense that instinctive tendencies, the culmination of countless biological trials, are ideal results. The truth is, Nature does not supervise our cultural experiments to the extent of compelling the relentless choice demanded of us biologically. Nature furnishes society with the fittest possible physical environment to which organic mechanisms have become adapted but she leaves the results and their diffusion to a capricious populace whose survival must depend upon its ability to utilize these mechanisms to the best advantage. Expressed in a Shavian aphorism: if man will not serve the experiment Nature will try *another* organism.

CONDUCT AN INDIVIDUAL MEAN

Good conduct, Aristotle² maintained, is a kind of mean, characterized by moderation between excess and defect, a tending to either of which leads to "wrong". But here the mean is not the point equidistant from the ends. Rather it is a division based upon the individual's accomplishment relative to his capacity. He is urged to avoid extremes and is expected to attain that which is neither too much nor too little for his type of personality and environment. This manner of judging conduct according to the status of each individual corresponds to our concept of social relativity. Thus while we recognize such a thing as a tendency to goodness, nevertheless in general terms moral excellence is held to be an acquired habit and not a natural endowment, in the development of which it makes all the difference in the world how the person's associates have been accustomed to act. Their praise and blame give the standard to

² Marshall, T., *Aristotle's Theory of Conduct*, London, 1914.

which the individual feels he ought to conform and to which if he does conform he is doing "right," according to his code.

COMMON SENSE VS. KNOWLEDGE

Persons of usual responsibility, interested in the conditions of their neighbors, consider themselves competent to conceive and to express convictions about the standards of conduct. Their interpretations of character are superficial estimates, lacking the quality of perspective, viewed in the single plane of moral excellence as "good" or bad." Generally the moralist relies upon his equipment of "common sense" to guide his analysis. With an equal interest, fortified with the knowledge secured from rational observations, the scientist tries to view not only the ethical picture but the entire panorama of being in order to analyze the relations of all its figures. Thus, for example, Shaler³ vividly portrayed the fundamental nature of hatred, with its tendency to view with suspicion any person outside the family group. Our first and chief estimate of the stranger is whether he impresses us as being "good" or "bad" and the irrational attitude, with its appeal to vengeance, thus superficially acquired is not easily transformed into unselfish assistance.

But the "moralist" with his limited interpretation of right and wrong has a close accomplice in the sentimentalist with his display of misguided sympathy. Often sincere, generally without special training, dogmatic in estimating the value of their personal ability successfully to cope with the failures of more experienced workers, such philanthropic laymen are likely to become the most disorganizing factor in the career of the semi-dependent delinquent, the "one more chance" type of individual.

CRITERIA APPLIED TO SOCIETY

Clearer conceptions of the relations between physico-chemical and social phenomena are leading society more and more to adopt scientific criteria in place of mere ethical estimates in judging social values. Thus translated Nature's test of fitness becomes economic efficiency, *i.e.*, success in the production and distribution of whatever induces public welfare.

Historical as well as analytical data confirm the opinion that

³ Shaler, N. S., *The Neighbor*, Boston, 1904.

intelligence, character and health are the fundamental elements of social analysis, to be determined prior to a consideration of material accomplishment. The balanced distribution of these three factors tends towards civic stability. Nevertheless, there is abundant evidence that communities and institutions may exist over long periods of time in a state of unprogressive equilibrium. Various religious orders such as the Shakers exemplify this situation. Historical observations thus call attention to the unequal value of these criteria and the supremacy of intelligence as a social asset. Health and the observance of wholesome ethical standards in a community of mediocre intelligence, however, are sufficient grounds for predicting peace and longevity. On the other hand superior intelligence with intemperate appetites and uncontrolled feelings may lead a creative though brief and unprolific existence. Neither class is productive in the highest sense. Nature herself eliminates, though all too slowly for human patience, the group of intemperate physical and mental incompetents. Thus there remains the chief group of all made up of individuals who conform to usual mental, ethical and physical standards.

Since social practices are acquired mostly by imitation and represent originally the mode of action approved by the strongest faction of the group, they become automatic to successive generations. The usual person adopts as public duties or traditions the customs of his community, thus acquiring the enviable reputation of being *normal*. While originality and creative ability have so far established themselves as fundamental requirements of progress for civilization to encourage new technical ideas and attitudes when suitably presented, even though such ideas savor of eccentricity, yet the individual who differs greatly with established ethical principles is considered antisocial or radical so long as he recognizes but rejects the usual order of things, and unsocial if from defective development he fails of such recognition. Unusual members of society are tolerated only within conventional limits and are dealt with more or less sympathetically according to the completeness of the community's social organization. Generally speaking social ideals still are slow to rise above the level of the commonplace where they fail to recognize that mere "morality, legality and urbanity lead nowhere."⁴

⁴ Shaw, G. B., *Back to Methuselah*, New York, 1921.

THE CONCEPT "NORMAL"

Royce⁵ defined as our main test of the normal the power of successful adjustment to one's world. The scientific utility of this idea is limited, however, unless success possesses a definite meaning, the scope of one's world is defined, and a number of questions indicating how the individual's normality is related to other component parts of the personality are answered. Thus expanded "normal" is a concept of Social Relativity.

Human success as a fundamental, biological minimum may mean the harmonious attainment of such instinctive needs as fulfil the individual's traditional mission in reproducing his species without deterioration and in improving its surroundings. Apparent contradictions such as are presented by celibacy, hereditary defect, unusual interests, and various social limitations may be brought into relation with this formula when viewed in the light of their traditional motives and social values. Racial and national customs, traditions and superstitions in eating, dress, sex regulation, religious practices, etc., are intimately concerned with relative considerations of normality. An American Indian whose first visit to the city resulted in the loss of his traveling bag naively left outside the street door of his lodging while he went to see the sights, was not "feeble-minded" as the charitable agency assisting him inferred but was following the custom of his village.

Physical and mental development and their relation to chronological age suggest a variety of pitfalls when superficially correlated with endurance, precocious functional tendencies, judgment, analytical ability, social responsibility and similar factors. An adult whose mental structure responds like that of the usual six-year-old child must not be held responsible for conduct demanding mature thought. Although physically mature his childlike activities represent the normal results to be looked for in such an individual. A young girl of precocious bodily size and reproductive system unduly active, with poorly organized control, hardly could be expected, without a conflict, voluntarily to develop and maintain a state of chastity or to adopt the virtuous air of the usual child of her age. Sexual relations are a normal element in her behavior and conduct.

⁵ Royce, Josiah, *Outlines of Psychology*, New York, 1903.

From this point of view the term normal, of current usage in describing the personality, is too inexact to be of analytical value unless it is correlated with biological tendencies and environmental conditions, in which case it may be used to signify the *usual*, a preferable term. Estimates of abnormality and opinions about conduct should be applied, therefore, with caution. Mere eccentricity generally is benign so long as its episodes center about matters of social concern and do not lead to personal conflicts between the individual's instinctive tendencies and his own fantastic creations.

CLASSIFICATION AND DISTRIBUTION

As an aid to social interpretation and as a means of expressing succinctly the results of relative analyses of the personality, a flexible classification is adopted. Although a variety of biological divisions such as sex, race, color, age, mentality, nervous stability, etc., are available for use as a basis for social grouping, a less cumbersome and more nearly inclusive scheme utilizes the individual's reaction to society. Economic efficiency already has been proposed to define man's adjustment to his surroundings. Its attainment in various degrees is used as a means of classifying a population according to the criteria already suggested. Thus an individual is normal or usual if his economic efficiency corresponds to the mode or value most frequent in or typical of his group; his personal responsibility, however, depends upon his mentality, disposition and bodily vigor. For analytical purposes, therefore, each of these categories is called upon to furnish data. The individual's place in the group, however, involves a synthetic determination of his economic efficiency relative to his associates.

THE SEGREGATIVE

In its first, qualitative analysis society is composed of those who possess economic efficiency and those who require support. The young and aged are or have been community assets and thus may be classed as efficient. Drones, under organization, are capable of self support. Antisocial opponents of traditional principles of culture potentially are creative, though sometimes vexatious, and should be classed as efficient. The ill or physically infirm, under treatment, mostly may be rendered effective.

Physically mature yet wanting cultural capacity are those dependants obviously in need of segregation. Their condition essentially is one of social irresponsibility. Relatively speaking their character and health may be normal with a handicap merely of mental incapacity. Not only are they incapable of self-support but they are unable to protect themselves from ordinary danger. Frequently they are not a menace to society, since they are socially unresponsive, nor are they a reproductive hazard for the same reason. When care with relatives is impossible institutional segregation is called for in order to apply more advantageously the elements of compassion.

DEPENDANTS

Excluding idiots and intractable imbeciles, individuals totally or essentially irresponsible and therefore clearly to be isolated, five socially assimilable groups may be recognized clinically and estimated quantitatively. Among this number may be included all persons capable of even the least contribution to society. Recognition may be given to adults whose mental capacity corresponds to that of the usual child of five years of age. Successful attempts at self-support are being made by youths of inferior intelligence, with institutional training. Of course community agencies must be utilized for supervisory purposes. In the past there has been a too general practice to segregate such cases without first attempting a trial in the community. It is becoming increasingly clear that with careful analysis and energetic vocational supervision begun early in life, imbeciles, even, may become self-supporting citizens, although they require permanent guidance. Frequently the more tractable members of this group make a definite contribution toward reestablishing a family stock suffering from developmental deterioration due to poverty in preceding generations, yet with hereditary possibilities intact.

In respect of intelligence most dependants are limited. They are distinctly feeble-minded. As adults their usual capacity for recalling, associating and analyzing such sensory experience as they are capable of assimilating—their ability to become responsible—covers a range ordinarily attained by the five to eight year old child. Their coefficient of intelligence generally is below .40. Some individuals have a well developed character and become respected

citizens and considerate parents; others are completely disorganized so far as instinctive control is concerned. Few are so insensible to training as to require segregation. As children they are pupils of special and continuation classes. Psychologically and socially such persons are easily recognized as *dependants*, literally hanging upon others. Wanting direction even in the smallest social maladjustments, domestic, industrial or otherwise, their simple automatic life breaks down and they become community problems. In spite of assistance their neighborhood relations generally are petty and unsympathetic. Irrational habits characterize their conduct; marriage is a mere convenience or constraint and children are mistakes left mostly to rear themselves.

In spite of their mental handicap few of these people could be debarred from marriage on the ground of handing on their defect, for their incompetency frequently is not transmissible, especially when traceable to causes interfering with individual development rather than to the function of hereditary factors. From this point of view such cases present a more benign social problem than we have been led to suppose from the charts of propagandists, since with proper mating and supervised living the offspring may become efficient, capable of repeating the cultural responsibility of earlier generations.

Individuals whose mental capacity falls below the mean of this group, whose social responsibility is about that of the usual six year old child, sometimes are spoken of as medium or high grade imbeciles, while the more efficient of this and the less responsible portion of the following group recently have been designated morons (*μόρον*, a fool). Although somewhat more veiled than the classical "fool" or "simpleton" of Colonial days, the term moron like its associate, "feeble-minded," is too inexact to be practical. *Dependant*, qualified by the appropriate intelligence decimal, expresses more rationally the individual's social capacity. Summarized in a phrase, dependants are poorly organized automatons.

SEMI-DEPENDANTS

Similar to the preceding type and differing mainly in degree of inefficiency are the Semi-dependants. Individuals of this group respond with the mentality and character usual in the child of ten years or less. Their coefficient ranges from .40 to .70. As in

other groups here also individual members may show well developed and satisfactorily organized character whereby they become law-abiding citizens and honest workers. Obviously their analytical ability is shallow, since their mentality is that of a child, and irresponsibility toward duties adequately interpreted but easily forgotten is a characteristic trait. Economically they represent in large measure the proletariat. The vicious circle of poverty would be far less evident were it not for the irresponsibility of this group. Actually they are able to torture the community more completely than even the Dependants, since the latter are recognized more readily and are taken under permanent supervision. The semi-dependent delinquent often appears capable of solving his own difficulties and sometimes, if a well balanced person, succeeds in a limited way. He becomes adjusted to a simple mechanical routine of animal existence to which he responds so well that the community forgets him as a hazard until his worth is put to the test expected of the usual individual. When this demand involves public responsibility with, consequently, a more general recognition of the result, the relativity between his failure and his biologically inferior personality is forgotten. His normal successes are overshadowed by his present inability to rise to a level superior to his natural limitations. A simple mechanic did his automatic task so well during ten years' service that, in the absence of his foreman, he was asked to assume charge. He failed to meet the requirements and was discharged. An analysis of the situation brought out the social relations and resulted in his reinstatement at his old position.

Dependants and Semi-dependants should be recognized early in their public school career as community liabilities destined to receive special nurture in their homes or in suitable training schools. Early apprehension with attention to their needs would produce in many cases adults completely self-supporting. From a relative standpoint, however, many of these defectives should be recognized as wards of the state to whom are due unremitting care and supervision. Some even of the least intelligent, after a period of training in special schools, may be returned to their homes, thereby relieving the state somewhat of the burden of complete support. To these individuals, aid, such as social insurance, might be given proportionate to the degree of dependency. Public agencies are coming increasingly to recognize the greater economy, improved efficiency and resulting

contentment from energetic welfare supervision of defective and delinquent persons whose civic rights and personal limitations may be more effectively developed in the community than in the segregative institution.

THE MEDIOCRE

Outnumbering the previous subdivisions of mentally inferior persons are those to whom the term *backward*, *dull* or *mediocre* may be applied. Their intellectual endowment corresponds to that attained by the usual child at ten or twelve years (recognizing, as in all these comparisons, that sixteen to eighteen years represents the maximum of intelligence). Relatively their mental coefficient ranges from .71 to .90. In the public schools individuals of this type progress slowly to the usual fourth or fifth grade where they lose interest from inability to comprehend the formal program and become disorganizing influences through truancy and incorrigibility, the natural defence mechanisms of such personalities. Their desire for vocational activity, sometimes with special ability in craftsmanship, has as its rational basis a limited mental capacity, some special ability, or both, unable to cope with the usual school subjects provided at this stage of training.

Self-supporting, yet unskilled and incapable of liberal culture, most adults of this class are characterized by mediocrity. They may be active and often efficient laborers while under direction yet are unable when abruptly presented with unusual situations to analyze, associate and inaugurate unaccustomed features of activity. Unchaste girls and pilfering boys, the two most frequent types of juvenile offender, come largely from this group, not because their reproductive tendencies are more active nor because they are more in want of life's necessities than others but because they are poorly endowed with an organizing capacity to control their natural reproductive and acquisitive tendencies.

THE NORMAL OR COMMONPLACE

The child's assumption of dignity upon entering the teens is based upon more than trivial sentiment. The person whose mental capacity corresponds to that generally attained during the thirteenth year of life responds to educative effort of the usual variety and becomes able to meet satisfactorily adult, community requirements.

Such persons respond quickly and appropriately to the sensory stimuli of their surroundings; they are able to interpret correctly, to recall readily, to judge accurately, to analyze logically, and to associate extensively the various experiences usually presented to the average adult. Through their own initiative largely, they develop the usual reaction-mode that has become the accepted standard of their community. Although subject to the customary trial and failure methods of education, they eventually harmonize individual differences, constructive or otherwise, and adopt the traditions of their family and neighbors.

The *normal* group, therefore, contains the commonplace populace whose conduct conforms to the property of inertia that pervades stable conditions—tendencies producing the usual, representing established usages and traditions in religious, legal, medical and social fields. All thoroughly sound measures must be administered by this group, and its members must cast the final ballot adopting or discarding social innovations. Since theirs is the monopoly of power, civilization can be developed only through their coöperation. Only through the leaven of the higher, creative group, which a commonplace type of personality at present is unwilling to sanction, can so-called normal conditions develop higher social values. That selection alone never produced anything new but merely perfects the old, would seem to justify the recognition of our revolutionary youth in some of their eccentricities. Their sheer energy may prove the deciding factor in establishing a new social code.

THE CREATIVE

Historical observations clearly indicate that creative capacity always has been confined to the very few; "400 in all history," said Galton,⁶ "and many of these interrelated." The populace does nothing to increase culture, except to help in its perpetuation and diffusion. In this fifth group, however, may be classified persons of superior intelligence, possessing a high degree of originality and, in rare instances, exalted intellectual power. The proportion of potentially creative individuals among children is undoubtedly greater than among adults, since custom soon puts a quietus upon hereditary possibilities, towards whose complete adult development

⁶ Galton, Francis, *Hereditary Genius*, New York, 1917.

environment generally is inadequate. With a better organization of social forces and with racial mixtures contributing to bring out potential genius, undoubtedly latent under present educational provisions, the distribution of creative individuals in large cultural groups should increase.

Although the group of original individuals is of superior mentality, the creative faculty itself often limits their power because of poor organization. Agreement upon principles not verified experimentally is impossible, however high their social value. Often the creative individual lacks influence either because his criticism of public measures is too vigorous or because if presented at all its application is too obscure.

The social need for creative leaders is nowhere more clearly urged than in an address on the Paris Conference in which Viscount Bryce stated that "a task so great needed not politicians of the usual type, but persons of the class which we now call supermen, persons who possessed not only a profound and accurate knowledge of the facts they had to deal with, but also a wide vision, a grasp of fundamental principles, a calm judgment raised above the revengeful passions of the moment, persons who loved and sought justice, looking beyond the present to the future, seeking the good of mankind as well as the advantage of their respective nations, able to appreciate the workings of those better forces which alone can bring reconciliation and peace to a distracted world."

CLASSIFICATION

Based upon the individual's responsibility as an economic factor society may be divided into the following classes:

- a. *Dependants*, including segregative irresponsibles
- b. *Semi-dependants*, intellectual dullards, the proletariat
- c. *Backward or Dull* the intellectually inferior
- d. *Stable or Commonplace*, the so-called normal people, the fit
- e. *Creative or Superior*, responsible for progress, the unusual

Cultural observations indicate clearly the fallacy of attempting to interpret economic efficiency on the basis of intelligence alone. Character, the foundation of conduct, and bodily vigor, the result of health, are equally important factors. Nevertheless ability to

understand situations in relation to other sets of circumstances is the highest attribute yet attained by organisms. Man is unique in his capacity to apply this quality. Obviously, therefore, the human organism should be measured primarily by the supreme characteristic of intelligence. Recently studies of social classification have concerned themselves largely with attempts to group populations according to their ability to understand. Clearly such attempts should not confine themselves to estimates based upon psychological tasks only. Social tests, too, must be utilized. Various aptitudes also, "the ability to think with the hands," for example, are as important for consideration as purely mental accomplishments.

From the results of measurements of fundamental psychological processes the following social interpretation may be made:

SOCIAL CLASS	COEFFICIENT OR QUOTIENT OF INTELLIGENCE
Dependant.....	? to 0.40
Semi-dependant.....	0.41 to 0.70
Backward.....	0.71 to 0.90
Usual.....	0.91 to 1.10
Creative.....	1.11 to ?

Based upon army examinations⁷ the following classification has been suggested:

SOCIAL CLASS	MENTAL AGE
	<i>years</i>
minus D—feeble-minded.....	7 to 9
D—inferior.....	9 to 11
minus C—low average.....	11 to 13
C—average.....	13 to 14.5
plus C—high average.....	14.5 to 16
B—superior.....	16 to 18
A—very superior.....	Superior to 18

The relative distribution of mental classes grouped according to their frequency in the general population can be estimated in a

⁷ Sweeney, Arthur, The Measure of Mentality, Jour. Amer. Med. Assoc., Vol. 76, 1921, No. 14.

crude manner only. For comparative purposes the results of two series of observations are given herewith.

A classification⁸ based on 1282 children and adults

COEFFICIENTS	CLASS	FREQUENCY
		<i>per cent</i>
0.50 or less	Dependant	1.25
0.51 to 70	Inferior	6.96
0.71 to 0.90	Subnormal	23.09
0.91 to 1.10	Normal	40.48
1.11 to 1.30	Supernormal	19.27
1.31 or more	Superior	9.20

Measure of mentality based on 3,000,000 army examinations⁹

MENTAL AGE	CLASS	FREQUENCY
		<i>per cent</i>
7 to 9	Feeble-minded	7.0
9 to 11	Inferior	15.0
11 to 13	Low average	20.0
13 to 14.5	Average	25.0
14.5 to 16	High average	18.0
16 to 18	Superior	10.0
Over 18	Very superior	5.0

Figure 6 adapted from Sumner's *Folkways* represents diagrammatically a classification of society according to the societal value of its members.

CLINICALLY SUGGESTIVE

Social Relativity as a rational, diagnostic step in the treatment of society may be summarized as a recognition of the biological development of conduct, philosophically considered and scientifically interpreted. It results in the discovery of various social groups whose assets and liabilities it attempts equitably to correlate in order to deal justly with the individual and to protect the group to which he belongs.

⁸ Yerkes and Wood, *Methods of Expressing Results*, Bul. Mass. Com. Ment. Dis., Vol. I, 1917, p. 107.

⁹ Yoakum and Yerkes, *Army Mental Tests*, New York, 1920.

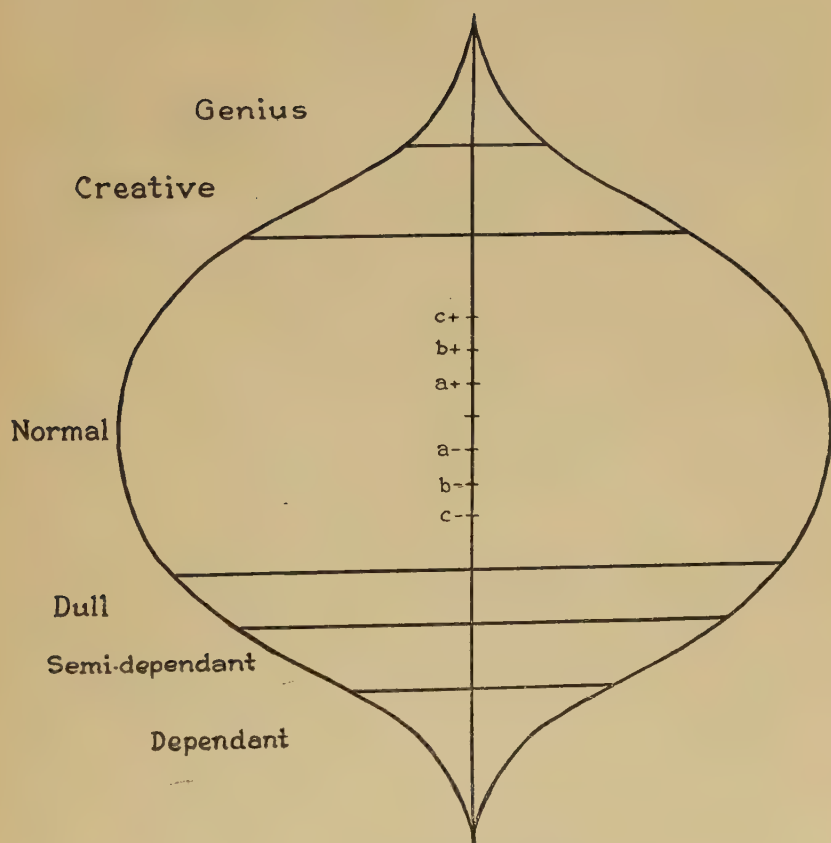


FIG. 6

The following table represents a crude estimate of distribution of our national population, grouped according to the social contribution of each class:

DESIGNATION ACCORDING TO SOCIAL CONTRIBUTION	CENSUS DISTRIBUTION
Segregative.....	0.50
Dependant.....	1.50
Semi-dependant.....	10.0
Backward or dull.....	27.0
Stable or "normal".....	55.0
Creative or superior.....	6.0
	100.0

CHAPTER IV

HUMAN ENERGIES AND SOCIAL FORCES

GENERAL PRINCIPLES

Social problems have their fundamental causes in the strife for survival of organic mechanisms long since adjusted to primitive wants but now subjected to complex, conditioning factors arising from cultural changes. Marriage instead of license is such a factor; judicial treatment instead of vengeance in the adjustment of personal wrongs is another. The vegetative nervous system and the endocrine organs reacting involuntarily to physico-chemical stimuli automatically produce the phenomena of behavior while the unique analyzers of the brain attempt to control inharmonious tendencies by the voluntary organization of conduct according to cultural standards. Appetites and altruism each are the results of cellular energies whose efforts are seen in family, religious, recreational, educational, vocational and civil organization as social forces, positive or negative as they serve to build or to destroy.

As soon as man attempts to utilize his social heritage bequeathed from lower animals to whom the herd instinct has served largely as a protective agency the newly acquired motive of sympathy demands that justice instead of might prevail in settling social differences. This procedure involves the presentation of evidence, the validity of which rests upon a fundamental, philosophical principle,—the distinction between belief and knowledge.¹ The former too generally bases its conclusions upon the principles of "common sense," while the latter relies upon the results of a critical examination of observations, convictions, prejudices and beliefs. Unreflective critics have, not without some degree of justification, characterized the first method as practical and the second as theoretical. Heretofore estimates of conduct quite generally have relied upon the "common sense" method of analysis whose definitions artlessly record merely what happens, leaving the reasons of the

¹ Russell, Bertrand, *The Problems of Philosophy*, London.

event unquestioned and unexplained. With a clearer conception of man's place in the animal kingdom and a better knowledge of the ways in which his propensities, needs and interests have arisen our ideas of human responsibility have been modified and traditions of what constitutes right and wrong are amending themselves.

PERSONALITY

In order to estimate the degree of control acquired by an individual or by a body of citizens organized as a state it is serviceable to analyze that integrated system of organic elements called the personality. Diverse conceptions of this term require a statement of one's philosophical point of view. As conceived by Haldane² personality is "the great central fact of the universe," to be dealt with purely on a *priori* grounds in which the category of end or final aim has actually replaced that of physico-chemical causation. Spaulding³ likewise argues for a personality existing only at a higher, non-scientific level where it appears not as a thing but as a value like goodness, beauty and truth. Clinical practice, however, is more in accord with the observation that "at present all study of vital phenomena is certainly being made by those who rely upon physico-chemical causes for their explanation."⁴ While an ethical analysis is reluctant entirely to disregard metaphysical concepts whose over-emphasis often leads to the substitution of sentimental beliefs for truth, it places greater stress upon the concept of an identity, although not yet established to the satisfaction of all, between physical and social factors. Obviously biochemical energy stimulates behavior the interpretation of whose force or mode of action, described as conduct, depends upon the degree the observer still utilizes mystical elements in his scheme of practical ethics.

As an example of naïveté in social analysis a recent report on delinquency asserts that the chief cause of juvenile misdeeds is the collapse of parental authority. When tested scientifically the report is found to be based upon personal opinion without systematic observation. Historical, geographical and racial factors thus are disregarded, while the melting pot's effort to amalgamate orthodox notions and radical ideas of youth are judged solely on the basis of

² Haldane, J. S., *Mechanism, Life and Personality*, London, 1914.

³ Spaulding, E. G., *What am I?* Scribner's Magazine, 1923.

⁴ Ritter, W. E., *The Unity of the Organism*, Boston, 1919.

annoyance caused the community by the family conflict. "Parental irresponsibility," a type of sentimental generality, often gaining enough credence to parade itself as a specific cause, would thus on the one hand deprive the family of its traditional religious formulae, in a country recognizing the right to religious freedom, and on the other would coerce the children into adopting a system of magic abhorrent to conceptions of liberty. For among our alien people the first clash with parental authority often comes from rebellion against traditional ritual resulting in the repudiation of home by the children with consequent depression in an unsuccessful environment. The establishment of harmony rests wholly on the recognition of various fundamental principles to be used in educating the participants to adopt new modes of culture. Such principles involve chiefly the loss of the *patria potestas*, or at least its curtailment, and the establishment of "home-sickness" through compulsory residence elsewhere.

When crime is stated to be caused principally by intemperance, idleness, ignorance, vicious associations, irreligion and poverty,⁵ or when girls are said to abandon home for want of maternal care and supervision, the reaction of unreflecting benevolence is to seize upon that part of the episode most highly colored by moral taboo and utilize it as a catch-word for propaganda. In this way "prohibition" fails to recognize the value of the "saloon" as an assembly room, an important element in perfecting the greatest reform of modern time; recreational facilities for youth are provided, but only as a reward for traditional forms of virtue. Schemes eliciting coercion with their officious tendencies to destroy instead of to utilize and amalgamate the unusual frown upon unorthodox religious views, even denying them expression. Indigence is condoned with small effort at reconstruction. Through prudery and dogma maternity is allowed to remain an aleatory circumstance.

Rationally analyzed the symbols characterizing social deviations from the mores or customary paths of conduct are as far from expressing "the cause" of disorganization as the irregular clock is the cause of indolence. Ingenuously catalogued as the sources of evil, poverty, intemperance, irresponsibility and disease are instead the gulfs whose streams retraced lead to the remote springs of mental capacity, biological balance and physical vigor,—qualities with great

⁵ Livingston, Edw., Code, Washington, 1828.

individual variations, responding to training and capable of developing social efficiency, the criterion of society.

From our point of view, positive or concordant, as well as negative or discordant social forces all start from physical and chemical energies identical with the energies acting upon lifeless matter. Unlike their inorganic manifestations, however, the dynamic qualities of society share the capacity of vital mechanisms to utilize a greater variety of stimuli whose ultimate development unobscured by moral, spiritual, or metaphysical speculations is the unified or integrated social being—the clinical personality. The sex glands or gonads, for example, are vital mechanisms possessing energy in the form of the substance gonadin. Under this chemical stimulation the human organism displays the reproductive motive or impulse, a force whose social manifestation is the procreative act, a highly organized phenomenon with tendencies to disorganization and surrounded by powerful taboos. Conforming to the group mores sexual union becomes a positive social force when controlled by the marriage compact; a negative influence in adultery and fornication. Clinically applied to the analysis of a girl's personality whose unseemly conduct has invited social suspicion, a biological as opposed to a "moral" interpretation would afford a rational basis for constructive effort toward adjustment. Such situations often are presented by children whose secondary sexual characteristics such as size, contour and behavior show precocious development resulting in uncontrolled conduct, out of balance with their chronological age.

BIOLOGICAL BALANCE

As a clinical concept, conduct may be defined as the degree of harmony attained by the individual in the social organization of biological mechanisms concerned with fundamental needs. Intimately associated with this function are the organic systems, the endocrine glands and the involuntary nervous system. Concerning the former Barker⁶ has pointed out that more and more we are forced to realize that the general form and the external appearance of the human body depend to a large extent upon the functioning, during the early developmental period and later, of the endocrine glands. Our stature, the kind of face we have, the length of our

⁶ Barker, L. F., *Endocrine Functions of Gonads in Males*, Trans. Assoc. Am. Phys., Philadelphia, 1914, Vol. XXIX, p. 100.

arms and legs, the shape of the pelvis, the color and consistency of our integument, the quality and regional location of our subcutaneous fat, the amount and distribution of hair on our bodies, the tonicity of our muscles, the sound of the voice and the size of the larynx, the emotions to which our exterior gives expression—all are to a certain extent conditioned by the productivity of our hormonopoietic glands. We are simultaneously, in a sense, the beneficiaries and victims of the chemical correlations of our endocrine organs.

So long as the physico-chemical equilibrium between nerve, gland and muscle cells and their surroundings is maintained a balanced social relation exists, antagonisms are neutralized and inertia prevails. But let there be a disturbance of chemical energy due to an increase or to a diminution in the relative proportions of substances characterizing the functional activities of a specific cellular community, and the resulting tension between itself and its colleagues induces the activity or force symbolically represented by the term appetite, need or desire. Involuntarily the organism's behavior tends to restore the balance and to relieve the want by invoking the aid of accessory muscular mechanisms such as those concerned in obtaining food, a sexual mate, protection from danger, etc. Here material energy is the stimulus to organic change whose social force starts as a *libido* or rudimentary desire, behaves instinctively, and merges into conduct as it comes to utilize in its organization the higher mechanisms of analysis and control. Thus the motive of hunger or desire for food, expressed through the disturbed physico-chemical equilibrium of an organic system dealing with nutrition, might be illustrated by the arms of a balance. The instinctive tendency shown in the physiological need for food tends to depress the long arm, the balancing of which tends to occur as soon as food is supplied. The feeling or affect of hunger or appetite is represented by the arrow, while the point of suspension represents intelligent control. (See Fig. 7.)

Rignano^{7,8} has pointed out the importance of biological equilibrium whose disturbance is the initial stimulus in human progress. Movements of approach or withdrawal, of attack or defence, of taking or rejecting are consequences of this mechanism. About it arise

⁷ Rignano, Eugenio, *Essays of Scientific Synthesis*, London, 1918.

⁸ Rignano, Eugenio, *The Psychology of Reasoning*, New York, 1923.

all our feelings. Related to its development is the entire locomotor system. As the chief factor in social evolution organic balance has been responsible for all discoveries and inventions from fire to applied electrical energy, all agencies that conserve the constancy of the natural environment, all associative phenomena in the integration of matter whose acme is the sympathetic reaction of human society. Moreover, when equilibrium is disturbed and cannot restore itself this stabilizing principle has induced the organism to develop an additional property—that of adapting itself to its new surroundings.

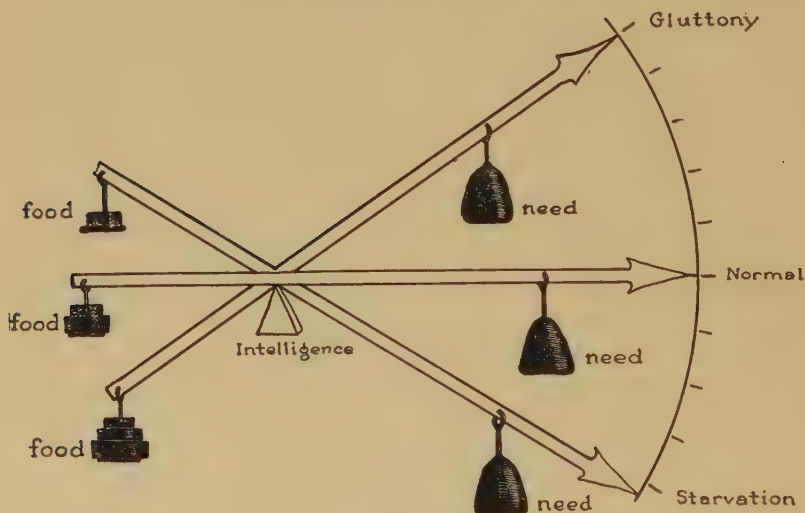


FIG. 7

Ability to take advantage of conditions not relentlessly fixed marks the transition from inorganic to organic, from things to organisms, and gives the unusual factor a better chance to survive and to demonstrate its evolutionary fitness.

INSTINCT AND CONDUCT

If causality is given a relative interpretation, recognizing reasons as approximating but never entirely satisfying fundamental demands, it is clear that social phenomena can never attain to a complete analysis. At present our biological needs appear to furnish the most satisfactory clue to the reasons for social changes. As the equi-

bration of organic mechanisms is undoubtedly the most nearly fundamental quality of conduct, of supreme interest in our analysis are the exciting stimuli and their purpose. We recognize that the acquisition and incorporation within the organism of energy-producing material, that effective provision for continuous descent and the evolution of advantageous methods of cross-breeding, and finally, that the fires of hostility, abundantly able to burn with fiercest intensity and astonishing suddenness in order to bring into immediate action all the defensive responses of the organism, present the earliest calls for the development of receptor organs. Sensations or the reactions to odors, light, sound, muscular tension and other environmental stimuli, activities tending to direct the organism's needs, express the earliest manifestations of so-called instinctive phenomena.

Perhaps no clearer statement of the nature of instinct has been given than that contained in Bechterew's⁹ direct reference to involuntary reactions induced by organic needs. "*Sous le nom d'instinct,*" he says, "*nous comprenons les réactions qui s'écoulent comme les réflexes, mais qui ont leur détermination dans les besoins propres de l'organisme.*" Bertrand Russell¹⁰ also finds the fundamental essence of instinct in its ability to provide a mechanism for acting without foresight in a manner which is usually advantageous biologically. Man's highest aims concern the organization of these primitive tendencies, the completeness of the process being correlated with his ethical development.

Clinically conceived, human instincts include the appetite for nutrients and the impulse toward procreation with its parental and other resulting tendencies; the responses to danger and the reactions of defence; tendencies expressing themselves in egoism or systematic selfishness, at the extremes of which are a positive disregard for the rights of others, and complete self-abasement; curiosity or an impulse to investigate new situations; repugnance, probably arising as a protective mechanism; joy or the spirit of play; and the herd, gregarious or social tendency. While the official list of instincts varies because of inexact definition, ranging from none in a conception of human behavior that shuns the term instinct, through a recognition of fleeing and fighting tendencies only, to a catalogue of half a hundred

⁹ Bechterew, W., *La Psychologie Objective*, Paris, 1913.

¹⁰ Russell, Bertrand, *The Analysis of Mind*, London, 1921.

primitive impulses, the list herewith given appears to be quite generally recognized by those dealing with the clinical aspects of behavior and conduct.

Although the relations of instinctive energies and social forces cannot yet be explained wholly in terms of fact, experimental evidence rapidly is supplanting convictions that still bridge gaps in our knowledge. Earlier psychological assumptions explained instinctive phenomena in terms of mental process involving aspects of knowing, feeling and striving. Now these primitive reactions are more clearly recognized as a cycle of changes in the organism's biological behavior. Observations show that such a series of activities as are called instinctive is induced by organic needs tending toward discomfort and consequent desire until they are satisfied, that is until a biological balance has been secured. Quiescent behavior is achieved as soon as this end is gratified.

Primarily all instinctive tendencies are involuntary or reflex phenomena initiated, without the organism's awareness, as *sensations* or the earliest "intersection of mind and matter." Sherrington¹¹ calls these sensory experiences the originators of bodily attitudes, whose prime function is to prepare the organism as a whole for later events. They are the earliest steps toward final adjustments, although they never represent complete results, and unlike images, the acme of organized sensory components, are caused by purely objective phenomena of the environment. Their intimate functional and developmental relationship to the endocrine system is of clinical importance in the analysis of affective tendencies or feelings—from our standpoint the most important elements of conduct. Instinctive activity thus is initiated by the responses of sensory receptors such as are supplied by olfactory, gustatory, visual, auditory and tensional mechanisms, acting reflexly and conducted along primitive nervous paths to gland cells or to muscle cells with accessory functions. Stimulated by the environment, sensations induce tension in nerves whose impulse evidently is a physico-chemical process connected with the movement of ions or electrically charged chemical atoms. The result is action with or without feeling or affect, depending upon the muscular system's demand for assistance from the endocrine organs. Later we shall consider how this demand may

¹¹ Sherrington, C. S., *The Integrative Action of the Nervous System*, New Haven, 1911.

remain below the level of awareness, functioning as an impulse; how it may rise to inferior levels of voluntary control as an attitude, or become still further organized as an emotion or sentiment, or suffer disorganization as an uncontrolled emotional affliction.

Although in the clinical analysis of instinctive tendencies, primary biological features may be emphasized, their involuntary activity, limited precision and readiness to accept modification by utilizing associative and analytical processes tend to their rapid passage into the domain of psychological inquiry. Thus the phenomena of the behavior cycle are limited chiefly to the impulses of the primitive receptors, the involuntary nervous or reactive mechanism, and its ally, the system of endocrine glands. Soon the primitive function of reproducing innate reflex phenomena comes to possess another prime function, that of responding and eventually of analyzing the multitudinous stimuli growing out of social relations. Pawlow¹² has called these newly acquired habit mechanisms *conditional reflexes*. Their mode of functioning is similar to the primitive or unconditional impulse although their stimuli are far more complex, even time itself being considered by Pawlow as a real conditional stimulus capable of satisfying philosophical inquiry. Thus a study of habits and their history may convince us that although their original purpose was quite dissimilar to their present application, the change has resulted as a natural, evolutionary process. In their relation to character, habits, as Noël Paton¹³ has suggested, are probably matters conditioned by the thyroid, pituitary, adrenal, thymus, specific sex and other endocrine organs whose regulation may be one of the functions of education and whose organization constitutes the personality.

Sensations as fundamental elements of the behavior cycle are colored directly by an accessory element symbolized by the term feeling or affect. Loosely described as emotions, affective tendencies appear to result from the functional activity of the endocrine glands interacting with involuntary nervous and primitive brain mechanisms. They represent modes of behavior usually described as fear, anger, wonder, love and hate. Although few in number the ability of these affects to combine, results in a variety of sentiments, with

¹² Pawlow, I., *Investigations of the Higher Nervous Functions*, Brit. Med. Jour. 1913, p. 973.

¹³ Paton, D. N., *The Regulators of Metabolism*, London, 1913.

love and hate as the two of greatest potency. Inasmuch as affective tendencies express the trends of instinctive development and organization, the basis of conduct, their clinical observation and interpretation are of importance in the analysis of character, a criterion of conduct. According to their mode of expression and degree of organization, affective tendencies receive various systematic names, three of which at least may here be considered because of their diagnostic value to Social Medicine.

A familiar example of loosely organized affective tendencies in the no-man's land between behavior and conduct is the reaction mode termed an *attitude*. The efficient teacher dismisses the session with a care to leave in the minds of the pupils no uneasy feeling akin to fear or anger over the day's proceedings. The aim should be the establishment of a pleasant setting of wonder for the morrow's tasks. Thus the child's subsequent play, food and sleep activities will be undisturbed by vague, intruding apprehensions about studies or by shadows of vindictiveness toward the teacher and he will return next day rested, nourished and eager to take up the school work. In such a situation the child's affective tendencies, although so indistinct as barely to mirror his instinctive trends, permeate his behavior with an attitude reacting favorably upon physical and mental hygiene. The result is an establishment of interest, the development of aptitudes and the organization of character. Improvement in school procedure has come from the tendency increasingly to consider the affective or attitude-forming factors of education.

Continued efforts toward harmonizing individual instinctive tendencies result in the development of greater systems of affects. To designate these combinations Shand¹⁴ has proposed the term *sentiments*, recognizing therein the tendency of the lesser affects, such as fear, anger, joy, etc., to organize themselves about a common motive. Love and hate exemplify such aggregates, each of which represents the welding together of various affective elements about a nucleus such as an adored object or an attitude of repugnance. Utilizing the sentiments mankind is able to organize his crude though essential animal needs, such as the generative impulse, with formal social restrictions like those imposed upon the sexes in their family life. In the development of character the sentiments tend with

¹⁴ Shand, A. F., *The Foundations of Character*, London, 1914.

increasing success to control behavior and stabilize conduct whose disorganization is attended by the affects attaining their individual freedom.

A third group of affective manifestations, differing from the sentiments among other respects in the possession of a greater degree of instability, are the *emotions*. Although the term wants exactness, recognition of emotions as inadequately organized affective manifestations is of practical importance in the clinical study of character. The significance of distinguishing between affects and emotions long has been neglected, a not unnatural circumstance, since each has the capacity to function alone or to combine with each other into systems. While emotions presuppose the presence of affective tendencies the reverse is not always true, yet both these elemental reactions so closely related to endocrine functions, are common phenomena of behavior and conduct. It is the method of coming into action that gives them clinical distinction. Emotions are affects tending toward sudden and violent modes of expression, although the sensory stimulus, depending upon the environment, may give rise to diverse emotions, to those of varying quality, or even to no emotion at all. Let our public school situation furnish a further example. Suppose the placid attitude of the children on entering school, an attitude containing as one of its usual affective constituents, fear enough for ordinary protection, suddenly is disturbed by the clang of the special fire gong above the door. Various types of behavior are observed in the responses of the children to this unusual situation. In general their reaction is a too rapid and intense form of activity, uncontrolled by organized effort. As expressed by Rignano:⁷ "There is an overflow of nervous energy which, suddenly released in great quantities, spreads and pours forth in numerous other outlets than those which are closely connected with the locomotor apparatus." Primitive biological, protective agencies temporarily achieve their freedom and voluntary control, will or reason is in abeyance. Of the individual with a good instinctive organization the reaction is no more sudden nor intense than is compatible with an orderly attempt to get away from harm most advantageously. At the other extreme is the person whose entire mental energy is consumed and whose critical faculty is paralyzed by the emotional outburst. Emotions, therefore, are seen to justify to some extent a pathological classification, not because

there is a specific relation between them and some special form of mental disease, but because of their protractedly disorganizing effect, similar to or involving the production of systemic toxemia on metabolism. The mood or emotional tendency toward fundamental affects (surlly,—anger; excitative,—fear) is an important element of our analysis. When thoroughly organized emotions develop into entiments.

Without forcing ourselves to draw ethical conclusions from experimental data we need not avoid an opportunity to interpret scientifically a number of descriptive terms whose wide social adoption is their chief excuse for recognition in the nomenclature of Social Medicine. Among these the word *sin* bears a special relation to instinctive tendencies inasmuch as it is the key-note of orthodox religious formulae, whose highly emotional content often restricts critical examination. It is well pointed out by Hocking¹⁵ that sin and the crude manifestations of instinct are not identical, sin being the deliberate failure to interpret an impulse with a view to confirm or to increase the instinctive integration of character. Many childish impulses are inconvenient to the adult; some innate dispositions are dangerous, yet there is nothing in original human nature which taken by itself can be called evil. What then is the basis of this disorganizing influence we call evil? William Patten¹⁶ has well defined coöperation as a universal creative and preservative agent through which evolution as a summation of power is realized. Evil, therefore, is that which destroys or prevents coöperation and good is that which perpetuates or improves coöperation while the struggle for existence is a contest merely in finding better ways and means of coöperating with one's surroundings. When it is realized that the fittest is the one who best coöperates, scientific, religious and social ideals will be seen generally to stand on common ground and to have a common purpose.

And what of our old friend conscience "that hath," as King Richard says, "a thousand several tongues?" Is not conscience the personal attitude toward self-analysis; the recognition not yet clarified into a sentiment or precept, that certain tendencies possess a questionable value in the organization of character and ought therefore to be submitted to examination? Conscience has been

¹⁵ Hocking, W. E., *Human Nature and Its Remaking*, New Haven, 1918.

¹⁶ Patten, W., *Coöperation as a Factor in Evolution*, *Proc. Amer. Phil. Soc.*, 1916, Vol. LV, No. 7, p. 503.

called the latest and finest instrument evolved for the building of character.

Summarized, our attempt to discover the ultimate sources of conduct leads to observations of the organism's fundamental biological needs comprehended by the term instinct. Acting upon highly specialized receptive areas such as the olfactory, visual and auditory mechanisms, responding also to pressure changes in physiological systems, instinctive stimuli produce sensations, the earliest clinical characteristics of conduct. Utilizing the involuntary nervous system as an automatic equipment, sensations represent calls to restore physico-chemical equilibrium between biological mechanisms. Not yet having arisen to voluntary levels of organization sensations are not subjects for introspective analysis. Their primary nature is physical, with biological tendencies speedily reaching psychological planes as they become capable of assimilating images and other elements of thought. In order more readily to assist this restoration of balance a system of chemical accelerators, the endocrine glands, has evolved as an indispensable assistant in expediting unification and organization of the total vital resources of the individual. As auxiliaries in the attainment of instinctive results the endocrine glands exert an important influence on conduct through their relation to affective phenomena or modes of feeling such as fear, anger, aggressiveness, etc. Observations show that the functional activity of these glands colors the instinctive result, inducing an attitude or settled mode of reaction on the part of the organism. Analyzing and restraining mechanisms have brought under human control rage and other affects voluntarily modified to meet human requirements. Wanting intelligent control, however, affective states may overwhelm the organism's field of conduct, acquiring emotional dominion in varying degrees. While emotions in moderation appear to offer a legitimate means of coloring life's drab monotony, their excessive activity may consume the whole energy of the mind, paralyze the critical faculty, and interfere with metabolism to the extent of inducing disease, mal-development and mental alienation.

STUDY AND EDUCATION OF CHARACTER

The clinical importance of observing instinctive phenomena has received too little scientific recognition. Le Bon,¹⁷ in his psychological

¹⁷ LeBon, Gustave, *The World in Revolt*, New York, 1921.

study of the world in revolt, emphasizes our failure to recognize that the education of character is more important than the education of the mind. The possibilities contained in studies of the personality based upon instinctive data are better realized when one considers the part played in the world's literary masterpieces, both secular and religious, by analyses of man's primitive needs and feelings. As St. John Ervine suggests, if one would know the elements of conduct he might more profitably read novels than scientific books, since the former concern themselves with analyses of human character and the latter rarely recognize its presence. Conduct, the social goal of animal behavior, results from character, whose structural and functional foundations demonstrably are distinct from the mechanisms of thought, although in the organization of conduct thought and character are closely associated. Chekov in one of his plays makes the young government doctor ask the peasant councillor, with his heart and soul aching in the grip of circumstances, "Do you really think that your character is so mysterious and that I am too stupid to tell vice from virtue?" Ivanov replies: "A man may be a splendid doctor and at the same time a very bad judge of human nature; you will admit that unless you are too self-confident. . . . In each of us there are too many springs, too many wheels and cogs for us to judge each other by first impressions or by two or three external conditions." Certainly it is a recognized clinical observation that the basic factors of character, the reactions of the involuntary nervous system and its colleague the system of endocrine glands, are far more effective as interpreters of social phenomena than the higher mental processes. Nor is this situation surprising since the organism's extensive antecedent history is found to relate almost entirely to its biological tendencies, its fundamental needs and feelings, its "having an instinct throned in reason's place," as the poet Bridges puts it, and to concern itself only slightly with the more recently developed psychological instruments of association and analysis.

Educational schemes, however, pay little heed to the intensive study of instinctive characteristics with a view to their rational development and organization. Medicine and hygiene likewise often misinterpret offences and cultivate the superstition that they are the result of sickness or are allied to disease. As the overemphasis of peculiarities in bodily contour led to absurd assumptions about

criminal types, so the characterization of misconduct as amenable to medicinal therapy leads to a false conception of pathological conditions at the basis of delinquency. Sentimentalists assume that "badness" is due to disease or is a disease and on that account to be condoned. Utilizing a functional cardiac disturbance, symptomatically benign, a young delinquent was able for a long time to satisfy his wants, dupe his naïve medical attendants, and wreck his own character, those about him believing that the boy's physical condition outweighed any social requirements in importance and that his problem was to be solved by the orthodox art of applying drugs. Most delinquents need educative rather than medicinal measures to help in the developing of deficient qualities at the foundation of character.

In Jean-Christophe Romain Rolland has pictured clearly the perpetual state of anxiety, resulting in shattered health and disordered feelings, because of the unbalanced child's consummate mastery of the art of keeping his parents on tenterhooks. "His idle mind was most fertile in inventing ways of rousing interest in himself and tormenting others—it had become a mania with him. And the tragedy of it was, that while he aped the ravages of disease, the disease did make real inroads upon him, and death peeped forth." Then the expected happened. The mother having been tortured for years with his imaginary illness, ceased to believe in it when the illness really came. Her store of pity had been exhausted; she thought he was still the comedian when he spoke the truth.

HUMAN MOTIVES

Founded upon fundamental, biological principles the motives of society do not change their basic qualities as fashions come and go. Summed up in the Greek Anthology¹⁸ social forces held the same position over two thousand years ago that they hold today.

What path of life may one hold? In the market-place are strifes and hard dealings, in the house cares; in the country labor enough, and at sea terror; and abroad, if thou hast aught, fear, and if thou art in poverty, vexation. Art married? Thou wilt not be without anxieties; unmarried? thy life is yet lonelier. Children are troubles; a childless life is a crippled one. Youth is

¹⁸ Select Epigrams from the Greek Anthology, tr., Mackail, London, 1906, pp. 299, 300.

foolish, and grey hairs again feeble. In the end, then, the choice is one of these two, either never to be born, or, as soon as born, to die.

Or again,

Hold every path of life. In the market-place are honors and prudent dealings, in the house, rest; in the country the charm of nature; and at sea gain; and abroad, if thou hast aught, glory, and if thou art in poverty, thou alone knowest it. Art married? so will thy household be best; unmarried? thy life is yet lighter. Children are darlings; a childless life is an unanxious one: youth is strong, and grey hairs again reverend. The choice is not, then, of one of the two, either never to be born or to die; for all things are good in life.

In the first epigram Posidippus sketches vividly the attitude of disparagement toward social forces; in the second Metrodorus gives an equally clear picture of their constructive tendencies. Two ancient poets here have compressed in a few lines the chief needs still felt in civilized communities and the mode of approach by the two great groups—the successful and the unsuccessful, or according to the Aristotelian ethics, the happy and the unhappy.

In the final analysis four fundamental needs emerge. Food and shelter must be provided. There must be protection from danger. Reproductive opportunity is demanded. Play, companionship and welfare complete the scheme. About these four biological interests may be grouped essentially all the problems confronting social organization. The individual's economic efficiency shows itself in his ability to meet the situations brought about by these elemental demands. Want of intelligence, lack of character and inferiority of health are adequate explanations, when applied to man's fundamental needs, of his participation in poverty, delinquency, reproductive instability, ignorance, idleness, dissipation and similar effects of social conflict. Social Medicine seeks to make a careful analysis of the underlying causes of complex appetites, feelings, needs and interests to determine the sources of their energy and the trend of their mode of action.

STANDARDS OF LIVING

Whatever may be the individual's social value, humanity recognizes his right to enough food and sufficient shelter to maintain a decent existence so long as he works enough to earn them. If his working capacity is handicapped the deficit must be assumed by the community or by his friends. Codes defining the just extent of his demands vary according to time and place.

Since his social group has sanctioned the individual's birth and at least his early development, making itself responsible for some degree of training, and since these events are circumstances in which the child has no voice so long as they do not openly contribute to his disorganization, the community owes him an opportunity to maintain life, or, wanting responsibility enough to profit by the offer, segregation and gratuitous care under humane control. Standards of intellectual and ethical responsibility, justified legally, are available for estimating personal rights in these matters.

FOOD

Fitness of environment in respect of energy-producing substances to be utilized by the human organism for edible purposes, and the wide adaptability that man has acquired to most animal, vegetable and mineral products yield conditions capable of refuting almost any right to complain. Not only is the food supply at present over abundant to meet the needs of general metabolism but also special therapeutic requirements,¹⁹ automatically directed by man's cravings, may be readily supplied, as for example, vitamin deficiencies whose correction by the ingestion of fresh fruits and leafy vegetables²⁰ is followed by surprising improvement in bodily vigor and instinctive stability. So intimate is the rapport between needs and desires that the result would be ideal if our instinctive tendencies were well controlled, as they are essentially in the well balanced person. Social forces showing nutritional discord appear in the problems of poverty, illness, conflicts of passion, and delinquency; on the other hand, a balanced food supply is a part of educational, vocational and other welfare schemes.

In order to deal justly with complaints involving chiefly the factor of food we have at hand technical means for determining the individual's physiological requirements of each of the fundamental food constituents.²¹ Likewise a quantitative estimate may be made of his comparative position in meeting standard relations between weight and definite body measurements as recorded by the Nutritional Index²² or a similar decimal scheme. The composition of

¹⁹ McCarrison, Robert, *Studies in Deficiency Disease*, London, 1921.

²⁰ McCollum, E. V., *The Newer Knowledge of Nutrition*, New York, 1922.

²¹ Chittenden, R. H., *The Nutrition of Man*, New York, 1907.

²² Carter, W. E., *The Pirquet System, etc.*, Jour. Amer. Med. Assoc., Vol. 77, No. 20, p. 1541.

food stuff,²³ its content of energy, its various therapeutic, physiologic and economic values and the best mode of preparation for efficiency and palatability have been made easily available. Likewise its range of prices is constantly being made comparable through Index Numbers, a statistical scheme representing the ratios of wage rates and commodity prices between a past year taken as a standard and the present year. The worker in Social Medicine has at hand a variety of devices for obtaining data to meet every conceivable nutritional problem with rational provisions for sympathetic adjustment.

When human energies relating to the food content of metabolic requirements are computed and their results or forces are observed the part they play in the field of human happiness and misery is extensive. Application for surgical treatment of chronic, gastro-intestinal diseases, affords a frequent example of the effects of poor nutritional habits dating from early childhood, their utilization to evade marital and domestic responsibilities, and a misinterpretation of the direction in which adjustment lies. Operative assistance often is advisable but the chief factor lies in a recognition of the intimate relation of nutritional energies to social forces. The influence of innutrition upon mental development affords also a striking example of the need of prenatal supervision²⁴ during the earliest months of pregnancy as well as the advantage of some system of public school feeding. The mental incapacity of retarded children, reared in unwholesome surroundings, may without doubt be favorably influenced by the early action of protective foods and a diet suited to the development of a balanced endocrine system. An outstanding feature of affective instability in children and youth is the disturbance created by food deficiencies. This appears to be related to changes held to occur in the adrenal glands and the pituitary body whenever protective foods are wanting in adequate quantity.¹⁹

SHELTER

The relation between housing and physical hygiene generally is recognized, but the effect of squalid, or even commonplace surroundings upon mental attitudes receives little attention. Public Health

²³ Atwater, W. O., *Chemistry and Economy of Food*, Washington, 1895.

²⁴ McCollum, E. V., *Supplementary Protein Values*, *Jour. Biol. Chem.*, Vol. XLVII, p. 175.

requirements even may be met, yet want of tasteful design in building and furnishing is responsible for cultural deterioration assigned by historical comparison partly to the decay in craftsmanship and more generally to popular dependence for effective stimulation upon social activities wholly outside the home. Progress in the development of one's intellectual ideals according to the cultural associations of one's early environment generally is confirmed. Weary years also must pass before there can be an extensive demolition and rebuilding of slum areas and reeking alleys, whose function now is to collect the product of all our social errors and to establish themselves as breeding grounds for every known social evil. Meantime the great need is for authentic facts on which to base a comprehensive policy and for a critical interpretation of these facts.

Observations for an accumulation of data in comparative studies make use of a "standard family" composed of a man, woman and three minor children. The housing of this group is computed according to standard requirements. A "minimum house"²⁵ for the average wage earner must have at least four rooms, preferably five—living room, kitchen, three bed rooms and bath. In these there should be enough light, air, and space to satisfy public health requirements, enough rooms to permit privacy and the preservation of self-respect, and as many modern conveniences as practicable. Pure water, sanitary conditions, at least a minimum standard of floor space, window space, cubic space of air per occupant, plumbing, fire-escapes, repairs and cleanliness, all should be available at a rental not in excess of one-fourth of the family income. And, when these all are secured, congenial neighbors, something in the way of a garden and interest in orderliness ought to be emphasized.

HUMAN REPRODUCTION

Equalling if not surpassing in output of energy the organism's nutritional reactions are its efforts to reproduce itself. With the most insistent stimulus known to instinctive behavior the sexual complex is capable of inducing intense states of passionate satisfaction and at the same time is responsible for more wretchedness than all other impulses combined. Restraint of its force has become so important to the biological and social welfare of communities that

²⁵ Wood, E. E., *The Housing of the Unskilled Wage Earner*, New York, 1919.

the most powerful taboos and codes have come to surround reproductive injunctions. Thus compelled to limit and to organize its authority the sexual impulse has sought the aid of various other primitive tendencies such as fear, anger, curiosity, egoism, etc., and has organized their forces about itself as a nucleus. This complex sentiment made up of reproductive impulses and defence mechanisms functions as the most highly organized social attribute of love, controlling and developing its primitive components towards unrestrained procreation into the legitimate social force of marriage.

Analysis of social problems whose chief component is the sexual element has always been hampered as well as helped by the "moral" basis of its observers. Whatever of sound knowledge has been contributed by the psychoanalytical movement initiated by Freud, its advocacy of more thorough observation of the instinctive phenomena of reproduction has made the topic less a subject for the confessional and more one for the consulting room. Thus considered as a social force impelled by physical energy, frequently uncontrollable by the type of intellectual organization with which it is associated, a more constructive attitude toward such socially disorganized tendencies as unnatural sex practices, illicit and promiscuous intercourse, commercialization of prostitution, illegitimacy and radical notions about free love has become established.

A number of traditional beliefs refuted by social studies suggest the more tolerant attitude now assumed toward the rational consideration of those who "wear the badge of unutterable shame." That most prostitutes are "feeble-minded" and that sexual promiscuity is confined largely to dependent and semi-dependent members of society are popular contentions. Scientific observation of the general populace and its reaction to fornication indicates that as many or more unattached women engage in its practice as are found herded together in houses of prostitution. Those who apply the art more successfully are intelligent enough to escape detection. Their less clever sisters caught in the snare of the reformer, are responsible for the superficial conclusion that intellectual inferiority is at the base of commercialized vice. As with less complex wares, the "home made" cry here also wins a strong appeal and those keen enough to organize their offerings on such a basis generally ply their trade unobserved.

The difference, biologically, between the sexual impulse in men and

in women is more widely recognized. The former, in his capacity as pursuer possesses a natural aggression unusual in the pursued. Thus chastity, although as important ethically, is a more difficult problem for the male than for the female.

Our analysis now also acknowledges a number of well-defined types of women differing in their reaction to the sexual appetite. Undoubtedly the less usual mode of passionate expression is intimately related to specific endocrine characteristics. The topic is more fully discussed hereafter.

Children born out of wedlock likewise are now more generally considered and putative fathers prevented from evading their obligations.

Of greatest constructive value in this entire scheme of sexual reciprocity is the recreational program of physical education and training for girls, helping them to rise above the plane of sexual inferiority without the loss of their finer social qualities and with a greater breadth of potential maternal interests.

So opposed to unconventional methods of dealing with the adolescent aspects of reproductive tendencies is public sentiment generally that sexual behavior offers one of the chief sources of social conflict between individuals, families and community agencies.

PROTECTIVE MEASURES

Adequate food and controlled reproduction furnish the human organism with the fundamental elements of subsistence yet without other means of protection against noxious agents the species would be unable to survive. The trend of evolution in developing each higher type of animal has been to arm it with keener receptive appendages and more efficient conquering mechanisms, leaving nutrition and reproduction to be cared for by more primitive means already perfected. Under scientific guidance this protection relies more and more upon surrogates like the microscope, instruments utilizing electrical energy, preventive therapy, surveys, social conferences, etc.

But long before *society* began to protect its members the organism itself had evolved definite biological defences against prevailing hostile forces. One of the most common of these forces is the mode of motion called heat, toward which the body has developed the response of pain and the recourse to flight as soon as an injurious de-

gree of temperature is experienced. Our biological impotence toward artificial or extinct forces may be illustrated by our insensibility to the noxious effects of uncontrolled rays from radium and other unusual elements. Exposed to such stimuli the body tissues are severely injured without a warning toward withdrawal. Meantime instead of relying upon the development of protective organs society must supply the artificial means of protection.

Biological energies automatically protecting the organism appear as fundamental forces in fear, anger, curiosity, disgust, joy and egoism—a list clinically useful even though its identity may be questioned. With the nutritive and reproductive appetites as nuclei these fundamental tendencies organize themselves into the sentiments of love and hate—passions as they are called showing affection, vindictiveness and other composite clinical systems.

Positive qualities of these elemental tendencies appear in complex episodes of the personality showing prudence, thrift, uprightness and similar ethical generalities. As negative forces they share with mentality the responsibility for social disorganization and are intimately related to the endocrine system of glands.

HUMAN FELLOWSHIP

The domestication of *Homo sapiens* has its beginnings in the herd, gregarious or social impulse, arising apparently as a protective tendency and later, when companionship is established, developing sympathy and community interests first for members of the clan or family and finally for all mankind. If human fellowship has followed the same trends as friendliness in other higher animals it undoubtedly received its first stimulus in parental tendencies whose gradual organization of sentiments about the mate, offspring, hearthstone, hunting ground and other preservative influences speedily led to the recognition that directing forces spring from household rights and traditions. Concerned with the fundamental or family group are the social forces connected with parenthood—its codes, customs, duties and relations to religious and other social phenomena. Among these analytical factors may be mentioned the legal responsibilities of the parents toward each other and toward the offspring and the varied attitudes of different communities toward the enforcement of these demands; community rights of the offspring even during the age of dependence, its inheritance rights after the age of maturity, etc.; penalties and means of dealing with non-support and other

evasions of recognized codes; conflicts between parents and offspring in the recognition of traditions, and personal rights of each; community agencies and their responsibilities in dealing with family difficulties.

From the standpoint of social philosophy consideration next may be given to the individual's various sources of contact with the larger social group—the community or neighborhood to which his family connections owe allegiance. Religious, recreational and educational agencies respectively claim the child's attention and seek to develop his interests. Human energies here are directed toward the organization of character, health and intelligence for the encouragement of self-support and creative capacity. In order to become self-sustaining economically most persons adopt vocational means, the social relations of which require much effort toward adjustment. Observations here relate to natural abilities, interests and capacity and their qualification to meet the requirements of the industrial or professional field sought. Analysis, direction and organization of vocational energy are helpful not only toward controlling social forces so destructive as causalization of labor among intelligent but unstable workers but also in helping semi-dependants to become social assets instead of paupers. Other important aspects of the social tendency in its bearing upon vocational problems are: protection of the worker's health; hygienic conditions in employment, such as lighting, ventilation and other means of reducing fatigue; just compensation against injury and slackness of employment, situations involving social insurance; establishment of a "family wage"²⁶ whereby differentiation is made in the wages payable to individuals according to their family responsibilities; rational consideration of the industrial exigencies of young people, with especial supervision of the mentally handicapped.

Finally man's social energies, as they are seen in his ethical, recreational, educational and economic systems or forces, are subject to various civic codes and statutes, generally defining broad principles of conduct as it relates to social welfare. Here it is our duty, as Bacon has suggested, "to remember the conclusion of the Roman Twelve Tables: *Salus populi suprema lex*; and to know that laws, except they be in order to that end, are but things captious, and oracles not well inspired."

²⁶ Labor Gazette, Family Wage System, London, 1923, Vol. XXXI, No. 3, p. 86.

CHAPTER V

BIOLOGY AND SOCIAL PROBLEMS

PRACTICAL DEVELOPMENT

As a supplement to medical fields, notably psychiatry, biology has made an important contribution to social welfare by pointing out the relation of hereditary tendencies to unusual personal characteristics and by stressing the instinctive foundations of conduct. More significant, perhaps, as a scientific achievement is its discovery and rational explanation of the *mechanism* of heredity.

While biology is a development of Aristotle's "Natural History," as a descriptive term it is barely a century old and its analytical practice applied to society is even younger.

Soon after the middle of the 19th century the cultural importance of biological ideals was recognized through the publication of Darwin's "Origin of Species" (1859) and Huxley's "Evidence as to Man's Place in Nature" (1863). The former established what is now known as the theory of organic evolution, a forward step displacing the prevailing theory of special creation. Huxley's contribution to this scientific revolution included not only his biological observations but also his influence in extending the love of truth and in the development of social problems.

During the Victorian era the world had accomplished a rebirth. Profound changes in thought and in the conditions of civilized life were responsible for suggesting important readjustments in social values. Scientific insight had freed inquiring minds from barriers imposed by established guides of thought which interpreted nature only through the perspective of creed. For the rational study of conduct a clearer knowledge of man's organic development was required and no logic was more compelling than the results of biological experiments.

While various biological beliefs about social phenomena such as "like producing like," harmfulness of marriage between relatives, transmissibility of feeble-mindedness, etc., have resulted in plausible hypotheses, it has been possible only by means of extensive ex-

perimentation upon lower animals to solve the riddle of heredity, the key to most genetic problems. Experimental biology applied to nutrition, to the consideration of racial mixtures, to questions about immigration, and to other civic inquiries needing scientific help, attests its value as a practical field.

ANALYSIS AND SYNTHESIS

The harmonization of civic tranquillity and cultural progress with individual freedom relies first of all upon the method of *analysis* to establish facts and to serve as a basis for recommendations. As a technical process analysis is best defined by its Greek derivatives, a-n-a, throughout, and l-u-e-i-n, to loosen. Separation of the personality into its various innate and acquired elements gives opportunity to weigh and compare traits or groups of characteristics with recognized values, more or less exact according to their degree of standardization and the cultural development of their environment.

Without the qualifications or the authority to investigate the causes underlying such elements of conduct as organic disease or insanitary living conditions, Social Medicine accepts the data of analysis and applies them to the solution of its task. The term *synthesis*, s-u-n, together and t-i-t-h-e-n-i, to place, best expresses the method of social integration and construction applied to such data. Synthetic treatment selects for adjustment such elements of the total personality as appear to be out of harmony with their surroundings. It weighs the environment, the capability, the interests and needs of the individual and attempts to bring about a balanced social relation.

"ENERGY" AND "FORCE" APPLIED TO SOCIETY

Our theory of behavior and conduct, either from a biological or from a pragmatic standpoint, is based upon physico-chemical phenomena in which energy and force are fundamental concepts. In their application we adopt the physicist's point of view¹ that *energies* are *causes*, whether they are concerned with material masses or with vital activities, while their *effects* or modes of action are called *forces*. For example, fear, a dynamic (dunamis, force) quality of

¹ Holman, S. S., *Matter, Energy, Force and Work*, New York, 1899.

character, appears to result from physico-chemical stimuli apprehended in the individual's surroundings and supplied by his physiological secretions.

Failure to distinguish energies from forces as clinical factors has caused confusion, while the interpretation suggested here may explain the physical basis of character, the precursor of conduct and may clarify our subjective attitude in judging conduct. For example a stone possesses energy, one of its modes of action being interpreted in our experience as a *feeling of weight*, an expression symbolizing not the causes nor the effects (accomplishment) but rather the affect (concern, solicitude)—the way we respond to the display of energy, latent or active according to its state of rest or of motion, in the stone. An intensive reproductive tendency inducing ill-controlled social manifestations in the delinquent girl, may be the result of glandular energies, chemically active, whose forces or modes of action ought to be interpreted as *irresponsible behavior*. From an orthodox, moral standpoint they merely represent *unseemly conduct*.

No *biological* explanation of conduct is possible without an appreciation of its fundamental connection with physical concepts. As mechanisms of character, energy and force express the urge of feelings, desires, interests and activities resulting from instinctive impulses, just as they express the power of an inorganic body to do work or to act in a definite manner by virtue of stresses resulting from its relations to other bodies.

MECHANISTIC CONCEPTS

The term mechanism is employed here to denote a system of mutually adjusted energies and forces contributing to produce and sustain prolonged action—in this case, life. Its use recognizes no fundamental distinction between inorganic, or mineral, and organic, or living, substances, but looks upon mere human existence as the highest material attainment in a series of organized and integrated reactions whose goal is *true* happiness as distinguished from apparent happiness.

Although the stages of man's evolutionary history can be analyzed in most respects and are subject to experimentation—e.g., the reproduction, perpetuation and growth of muscular tissues isolated from the main body—certain steps in the process of vital organization appear to be wanting. On reflection the hypothesis that the

developing cosmos may have discarded some of its primitive mechanisms as they have become inactive and obsolete may explain these lacunae. Supplanted by newer agencies for which there was an active demand these archaic energies have atrophied, have become amalgamated or have been submerged and in some cases may have disappeared entirely. The primitive method of initiating life from inorganic elements may be inferred to have disappeared in this manner from the earth after a variety of more adaptable and more efficient mechanisms of reproduction were evolved and distributed. The human organism's lack of protection against such generally inactive forms of energy as the x-rays, although well protected against such common forces as fire, illustrates this phase of evolution.

BEHAVIOR

The aim of Social Medicine—to improve human relations through better organization or control—counts among its foremost elements of analysis fundamental animal or biological tendencies ministering to nutrition, protection and reproduction, all responding involuntarily to physiological demands and satisfying propensities inherently selfish. These natural impulses, evolved through ages of trial and retrial, represent functional stimulation of specialized organs responding to distinct needs for environmental change and for the acquisition of results without the intervention of thought. They constitute the phenomena of *behavior*. Hunger for food, for example, represents physical and chemical needs centered in the gastro-intestinal system, the approved method of satisfying which is by the ingestion or eating of craved substances. Fear and anger represent biological mechanisms of protection when impulses of danger arouse the functional activity of such glandular organs as the adrenal bodies whose physiological contribution involuntarily places the organism in a position superior for defense. Hunger for reproductive satisfaction results from physico-chemical stimuli secreted by specific sex glands, expressing reflexly needs of the most urgent nature.

Modes of behavior represent the best ways of attending to animal needs from purely selfish motives. So important for existence have these traits become that their mechanisms act automatically or reflexly, unless needs are voluntarily supplied, while often they strive without the possessor's recognition to get control of life's

social situations and to mould these situations to a primitive purpose. Noctambulism or sleep walking may become such a behavioristic tendency, revealing the reluctance of an ulterior interest to release its hold even during repose when essentially all levels of awareness should be at rest. Goaded by the insistent stimuli of his profession, a horse-thief used to leave his bed while asleep and visit his own stable, there to be awakened by the object of his search.

Young children of precocious intelligence sometimes show this trait when they are overweighted by school interests and sensory stimuli crowd in number and variety too great to be assimilated by the immature analytical mechanisms at work during the day only. The involuntary nervous system refuses to rest according to the dictates of the higher nervous centers and, attempting to conduct affairs on its own plan, impels the child to walk about in his sleep.

Nocturnal enuresis or bed-wetting often represents such a conflict.² Here the natural tendency to relieve the urinary bladder fails to heed the newly conditioned, inhibitory reflex induced by social organization.

CONDUCT

Conduct, also analytically fundamental, represents the results of organization of behavioristic tendencies under the influence of the herd instinct. Through association of individuals in groups, fear, anger, the egoistic impulse and other primitive traits are united, modified and developed into complex social influences such as love and hate, sympathy, generosity, benevolence and altruism, resulting in the establishment of such group attitudes and interests as peace, order, liberty, security, justice and equality under the law.

Although so efficient individually as to have become automatic, vegetative animal needs show, on the whole, even greater capabilities under the influence of the herd.³ Nevertheless the numerical power of the group and its suggestibility sometimes have caused deterioration instead of development. Examples are: The devastating effects of anger in modern warfare; evasion of reproductive responsibility for sensual enjoyment only; metabolic disorders from a too plentiful supply of food. One has but to compare the restraint

² Dunham, F. L., Suggestion in Nocturnal Enuresis, *Amer. Jour. Dis. Children*, Vol. XII, p. 618.

³ Trotter, W., *Instincts of the Herd in Peace and War*, London, 1917.

imposed upon the sexual life of some of the lower animals with its license among the human species to recognize the force of the suggestion that social organization does not necessarily connote excellence in human conduct. The wide variability among individuals in modifying and controlling their temperamental qualifications is even more significant than variability in mental capacity.

CHARACTER

As *character* we refer to the results of instinctive forces and their organization individually or in groups under the direction of gregarious or social influences. Character is said to be balanced according to the degree of control its possessor develops over his behavior in meeting the standards characterizing his group. Completeness of this control measures to a great extent his social efficiency or conduct. Temperance in eating and drinking; sexual control according to monogamous standards; "honesty" and sympathy, are the usual assets of economically responsible people.

Any attempt, however, on the part of the modern statesman to direct public education to the formation of character is met by the objection that character depends upon religious (or non-religious) convictions, and that as there is no agreement on the subject public money must not be applied to it. Education, therefore, so far as the state is concerned, takes the form of supplying miscellaneous information to the young and leaving them to pick up what conduct they can by the way.⁴

REGULATORS OF BEHAVIOR

A generation ago intelligence bore most of the responsibility for behavior and conduct. Biology had not been utilized to explain physical peculiarities or unbalanced feelings. Comparative studies now are bringing to light hitherto unknown properties of obscure organs intimately concerned with the more subtle moods of behavior. Stature, contour, femineity and virility for example are correlated closely with definite glandular types. The organic harmony of health, metabolism or the construction of living tissues, character as the sum and degree of organization in behavioristic tendencies, and other important personal characteristics now are known to depend upon delicate chemical and physical regulators.

⁴ Marshall, T., *Aristotle's Theory of Conduct*, London, 1906.

Vital mechanisms whose fundamental characteristics reside in the germ-plasm or reproductive cells are: Thyroid and suprarenal chemical regulators whose structure now is quite definitely known; delicately adjusted neuro-chemical devices to control the respiratory function; functional stimulators of the reproductive organs, setting on foot impulses to intellectual and ethical authority; a circulating fluid whose colloidal balance exceeds in importance even the minute equilibrium of its chemical neutrality; a central base for emotive reactions—the structural mechanism of our “feelings”—residing in an ancient organ (the optic thalamus) hidden away in the interior of the brain.

PHYSIOLOGICAL EQUILIBRIUM

A scientific view of social adjustment, of the balanced relation between the individual and his surroundings, recognizes in the social problem a disturbed biological state in which the fundamental factors of behavior have become involved with new conditions imposed by the environment. Another series of phenomena must be established, either through personal initiative or with assistance. Social Medicine attempts such assistance. The principle of adaptability arises from the fact that the various physiological mechanisms of the organism must maintain a state of harmony in unified action. If surrounding conditions unbalance the usual stable relationship of these energies a compromise is necessary. It is not always possible to reestablish the same conditions, therefore new situations must be met. The power of adjustment becomes a necessary development. An example of this important biological phenomenon is seen in the maintenance of the chemical constitution of the blood, a fluid whose formula is a heritage from antideluvian experiments with life in primeval oceans. Any considerable permanent variation in the quality of the blood results in death. Its essentially neutral condition must be preserved and to this end a sensitive physiological balance is maintained. But a tendency toward the accumulation of acid in the body and its fluids is one of the inevitable results of man's extensive dietetic regime. The constant resistance, with slight adaptability when surroundings place rigid restrictions upon the quality of food, in stabilizing this reaction according to fundamental regulative requirements is a trait resulting from our law of physiological stability.

Disorganized egoism as a characteristic of autocracy offers a

social example, where a tyrant's history records an incessant struggle to maintain a balance between acquisitions and unrestrained desires.

ADAPTATION

Trite though it first appears the mere distinction between animate and inanimate, between things and persons, involves an important social principle. *Things* are inert, without choice, the result of relentless conditions, dependent upon other agencies, responding, in the usual manner if at all, to the exact demands of physical and chemical reactions. Relatively the term applied to human dependency is not a misnomer nor a contemptuous epithet. Transformation from mineral to living, from clod to organism, is the result of organization and integration of mechanisms developing a capacity for adjustment to new surroundings, to an environment not fixed but open to choice. Vitality emerges as soon as the mass develops an ability to get away from immutable conditions, to utilize changes. There can be no development beyond the bounds already set, no progress nor evolution of the unique, so long as the object to be acted upon is able to respond to no new stimuli. It is the *usual* object that fails to develop this capacity, consequently its existence depends upon *fixed* conditions. As soon as there is adjustability to varying conditions the *unusual* object arises. The atypical thus may demonstrate its survival possibilities and may bring into existence new structures and traits, the evolutionary basis of higher organic types. In the same way unconventional actions evolve from traditional modes of conduct. Adaptation is a primitive biological tendency, wide in range of acquisition and an important element in social analyses.

ADAPTATION AND PERSONALITY

With fuller recognition of the potentialities of the home, the family, the church, as well as of medical, legal and other community agencies as the rational means of organizing character, the foundation of conduct, without interfering too much with the trend of individuality—with the utilization of asylums, reformatories, prisons and almshouses as antique devices for segregating hopeless and last-resort cases,—has grown a corresponding realization of the value of clinical analyses of the personality.

In a large measure the unique result of physiological activities,

the clinical personality possesses profound individual differences. As a scientific term it is here used without metaphysical connotation to express the unified result of mental capacity, instinctive development and social achievement. Its unfolding is due to the growth of innate tendencies or to individuality, and to outer influences and agencies with which the organism comes in contact. As soon as we discover, through the use of scientific methods, the true relations of these factors, popular notions of right and wrong assume a deeper significance and charity acquires a broader outlook. Intelligence is found to be merely another expression for alertness in thinking while character and health, according to the harmony of their environmental adjustment, are the factors resulting in coöperation, the universal creative and preservative agent. Disorganization of organic forces prevents this coöperative activity, resulting in the ethical concept of evil. Organization or control perpetuates or improves coöperation and establishes the opposite quality of goodness the antithesis of evil. Realization that the struggle for existence, physical well-being and cultural development are contests in finding better ways and means of coöperating, and that the fit, either traditional or novel, are the ones who coöperate best reveals the common ground upon which science, religion and government ought to stand and the common purpose they should achieve.

HEREDITY

With the biological principles already outlined as guides in the scientific interpretation of conduct, it is possible to observe, classify and interpret tendencies of the personality according to at least two fundamental schemes, one of which deals with the appearance in offspring of organic features or properties whose differential causes reside in the egg of the female and in the sperm cell of the male. Collectively these characters constitute one's heredity, a fact whose statement corresponds to the reactions of a well defined mechanism, many of whose characteristics are known and are found to explain problems of society. While lower organisms have furnished most of the experimental data, results are found to apply with equal force to the highest organism.

Although loosely used to express the biological relation between parent and offspring the term inheritance implies rather the acquisition of tangible properties and, therefore, should not be used

to designate organic *tendencies*, (which are not generally *identities*), transmitted in the development of the germinal substance. Stature is such a tendency, inherent in the germ cells of the parents, yet following definite laws accounting often for complete dissimilarity between parents and offspring. A tendency to mental disorganization, appearing in a parent as insanity, may result in extraordinary endowment of offspring or in utter deficiency. Studies in human heredity thus far have shown remarkably few instances of like following like but innumerable cases of inclinations toward specific traits.

Generally speaking the germ-plasm, the parental reproductive material, is a highly stable group of specially endowed cells whose characteristics according to present observations appear to remain fairly constant from generation to generation. Biologists have hitherto stated that only the profound changes wrought by prolonged poisoning of the parental system with alcohol, lead and other chemicals or by the noxious products of such diseases as syphilis or tuberculosis or by excessive physiological secretions have the power to interfere with this human embryonic material as it pursues its parasitic growth, exodus and union within its maternal host. Nevertheless some experimentalists affirm that various environmental factors are able to change the heredity mechanism itself, in lower organisms at least. Thus it does not appear wholly immutable as certain workers have contended. Various observers have shown that a specific environmental reaction may produce profound deviations in organs; that under certain conditions a given germ-plasm produces one result, while under other conditions quite dissimilar characteristics appear without the evolution of intermediate forms. This conception conforms more nearly to the earlier teachings of biology when environmental influences were overemphasized, a tendency displaced later by the theory of an immutable germ-plasm. The utilization of both points of view, therefore, is rational and inspires a more hopeful attitude toward the improvement of inferior stock through agencies contributing to human needs, better food, better housing, and better hygiene. Modern biological methods applied to man's genetic problems have clearly shown that superior nurture, carefully trained mental development and selected mating, may bring out man's hereditary potentialities and augment social values in families now showing inferior capacity.

CELLULAR MECHANISM

The causes and effects of heredity and their relations to developmental phenomena both biological and social have been measured more accurately since the discovery of the *chromosomes*, the mechanism of transmission. Whether the human reproductive cell contains 24 or 48 of these self-perpetuating particles of matter, each one responsible for the occurrence of definite, personal traits, is uncertain and here matters little since even the smaller number in its various permutations and combinations might generate innumerable diverse, organic features accounting for almost limitless personal idiosyncrasies. At any rate each body cell (somatic cell) and each reproductive cell (germ-plasm) contains a constant number of chromosomes, characteristic of each species of organism.

While the exact physico-chemical nature of the germ-plasm is not yet known, observations indicate that its constituent chromosomes, one-half of which are traceable to the mother and one-half to the father, do not represent the ultimate elements standing for hereditary properties. This latter distinction appears to belong to the so-called *genes*, small parts of the chromosomal thread, perhaps in the nature of chemical molecules, capable of separating and changing positions, and of bringing out in this way a great variety of heritable traits.

Hereditary properties conform to a number of laws, two propounded by the priest-biologist Mendel in 1865 and four others more recently suggested in which are formulated such scientific generalizations on heredity as at present seem clear. These observations relate to the usual physical behavior of the chromosomes in the cell as they appear to develop and combine, each producing manifold effects on the organism as a whole, while each part of the organism represents in its structure and function the results of a vast variety of chromosomal reactions.

While identical principles of heredity apply with equal force to all organisms the futility of attempting to predict in mankind results so exact as those predicted of the lower animals is apparent for two reasons at least. Strict experimental supervision over human reproduction is impossible and at the same time it would be vain to limit every child's environment to standard experimental conditions. To secure exact results only pure bred organisms may be

utilized, i.e., those reared under an identical environment generation after generation.

While environment may fail to produce directly a *permanent* change in the germinal mechanism so profound as to be transmissible, external conditions *are* able to induce marked variations in the individual development of organic features and properties. Moreover such changes often persist in offspring so long as the surroundings furnish the necessary stimuli. Want of capacity, interest and economic efficiency may characterize succeeding generations as the result of surroundings incapable of bringing out all the possibilities of the reproductive cells. Striking results of this nature recently have been demonstrated in biochemical researches in nutrition where the behavior and conduct of animals maintained on a deficiency-diet were completely altered, stupidity and inertia supplanting alertness and self-protective qualities.

Since it is impracticable to apply to the human species the principles of animal breeding, still in an experimental stage, or to limit man's surroundings and activities to a laboratory regime, Utopian schemes to restrict and control reproduction clearly are subjects unsuited to legislative tinkers. Race improvement emerges from individual education which follows economic efforts to improve the quality and supply of food and the character of living conditions, and not from the coercion of instinctive rights casually interpreted as expedient.

Fortunately the time has almost passed in which the propagandist may rely upon an audience so ingenuous as to accept Mendelian diagrams as a complete story of man's biological destiny. Experience has taught us that there is no reason to assume from a study of the pedigree chart that any individual is entirely good or wholly bad. Each person possesses a relative proportion of ability to achieve so long as he retains any measure of economic efficiency. Instead of presenting a person's history as an irrevocable reminder of changeless consequences it might better be utilized to show the actual dominance of ability over unfavorable qualities when development eventuates from improved surroundings—a view resulting from more nearly adequate biological interpretation of fundamental mechanisms. For it is possible to compensate hereditary deficiencies from the chances obtained in crossing—parental resources combining into new forms and sharing in the modified result.

When first the principles of heredity were recognized as applicable to breeding, results in offspring were predicted too exactly from known parental characteristics. Features and properties of one parent were supposed to develop to the exclusion of contrasted characteristics in the other parent. While such results may occur, they represent the unusual course of events. Color, for instance, was thought to possess an hereditary influence so strong that the tint of the dominant parent would appear as an identity in the hybrid offspring, while the color of the less potent parent was said to be recessive or unable to show itself when mated with an individual showing dominant traits. Now it is known that the offspring generally is intermediate between the parents, even when a single pair of characteristics such as color is involved.

APPLICATION OF BIOLOGY TO SOCIAL PROBLEMS

So unfamiliar to welfare workers are the possibilities of biology, such as the application to social problems of its observations explaining peculiarities of the personality, that its accomplishment sometimes seems meagre when compared with the more spectacular performance of psychology with its novel results. Evidence supporting the view that biology is indispensable in the analysis of such social situations as that of economic inferiority may be offered to substantiate its claim as the fundamental instrument in personality studies.

In order to justify his rights to social equality the individual must attain to a degree of economic efficiency equal or superior to a usual community standard whose criteria should include both mental and biological factors. On the evidence of its own technique alone psychology, adopting the term "feeble-minded" to indicate a degree of adult mental incompetence corresponding to the usual intellectual development of the first twelve years or less of life, has shown itself too ready to condemn to life-long segregation subjects whom, on the basis of mental tests only, it judged to be social incompetents. As formulated by one of its adherents: "If individuals are feeble-minded then no amount of good environment can make them anything else than feeble-minded. Schools are not for them, but rather a segregation which will prevent them from procreating their kind." Thus without waiting for biology to pass upon the human significance of its newly discovered data, enthusiasts speculated upon its social

significance and came to the conclusion that the condition described as feeble-minded is always hereditary and often presents an intolerable situation demanding segregation and sterilization.

Treatment of the conditions involved in social mediocrity as determined by psychological diagnosis, in limiting still further the individual's environment, has tended to create distrust in "scientific" methods applied to welfare. Skeptics have questioned the rationality of analyses depending upon mental measurements only, while observations of the individual's character and bodily vigor were neglected. And when permanent institutional care for stupid but self-supporting persons was advised, "common-sense" assumptions have often been preferred to so-called scientific recommendations.

Biology is as ready to recognize the undesirable germinal constitution of notoriously degenerate stock as it is to emphasize the wide distribution of desirable hereditary factors awaiting a favorable opportunity for development. It seems clear that for the most part human germinal tendencies however potent incline, in the present drab surroundings of poverty where fecundity is greatest, toward mediocrity (Fig. 8). With fundamental appetites and feelings as life interests, without courage or insight to think independently, with mere existence the grim business of labor, it is not strange that the populace rises at best to a level of stable mediocrity. However, it seems clear that factors contributing to produce and develop the creative type of person are widely distributed in the general population, although they rarely are brought together in suitable surroundings. If they were so blended originality would appear oftener than at present, in spite of the belief that genius always is able to rise above unfavorable circumstances. At any rate, whether the attempt is made to estimate the relative value for the inherently inefficient of segregative treatment over supervised self-support in the community, or to nurture a race of supermen, the problem is largely biological.

As an example of biological and psychological practice consider the usual artisan, requiring a long term of apprenticeship to learn what the creative craftsman acquires, often unaided, in a comparatively short time. Or again observe the inability of the usual so-called skilled laborer to analyze his own economic situation and his readiness to rely upon a delegate whose crafty wit raises him to the position of dictator, although he himself may be wholly in-

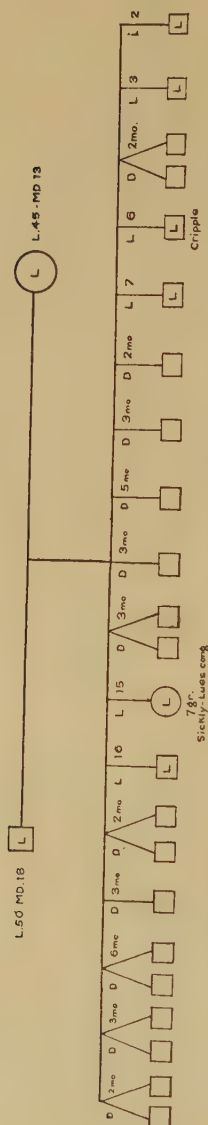


FIG. 8. FECUND MEDIOCRITY, WITH SIX TWIN BIRTHS, ELEVEN SINGLE BIRTHS AND SEVENTEEN DEATHS

efficient as a craftsman. Such is the general condition of the socially backward and semi-dependent classes of society. Psychology would describe many of them as feeble-minded. Biology, however, calls them economically efficient as a group, especially if civic and economic agencies deal with them rationally. As parents they generally are as considerate, though less capable as teachers, as the average of other groups more highly endowed by nature, while their dutifulness to political affiliations makes them an organizable power, an infrequent asset of original thinkers. History verifies their ability often to produce offspring of the creative type.

Another questionable inference having a psychological origin is the relative numerical distribution of feeble-minded persons detained in training, corrective and custodial institutions as compared with their number in the community. The former are said greatly to exceed the latter. Biological analysis favors the view that the relative proportion of intellectually inferior persons in or out of institutions is about the same. Few opportunities for examining community or industrial aggregates have been available, but wherever such observations have been made the numerical distribution of mentality has agreed essentially with reliable institutional data. The fallacy of suspecting a close correlation between delinquency and feeble-mindedness appears to have resulted from ethically tinged prejudices drawn from measurements of intelligence among institutional inmates only without comparison with control groups in the community.

Details from its biological history show clearly that the law-abiding community finds among misdemeanants and prostitutes compeers in mental capacity but not in character.

Briefly summarized current biological theory does not hold the view that all hereditary tendencies are irrevocable, that a parent showing a true hereditary defect in mentality, for example, is doomed to transmit this tendency to his child. Mating and environment both may tend to change the results of parental deficiency furnishing the offspring a good chance to supply itself with the qualities lacking in one or both parents, while the combination of hereditary resources may produce qualities better than those shown in either of the parental germ cells. This statement of the most responsible experimentalists satisfies a hope long thwarted, i.e., that efforts

toward improving the social status of mentally inferior parents are well founded.⁵

DEVELOPMENT

In beginning our discussion of heredity we mentioned two fundamental schemes applicable to scientific study of the personality. An analysis of hereditary features furnished the basis for the first scheme. Development is the foundation for a second plan of observation.

Inadequate environment may affect development in its earliest embryonic stages if the offspring is subjected to the poisons of such infectious processes as syphilis or to the results of imperfect metabolism circulating in the maternal blood stream. Groups of cells destined to form specific organs such as the brain are imperfectly nourished and may produce structures of inadequate functional capacity, although the full results of the mischief may be delayed in appearance until adult stages of development. Inferior intelligence sometimes may be due to this early interference with the usual processes of cleavage or organic differentiation into cell layers. The more generally observed hindrances to development come from inadequate hygiene, poor diet, irrational training, economic evasion and numerous other biological and social deficiencies.

In order to make clearer the distinction between hereditary and developmental defects the biological characteristics of cell division should be borne in mind. The bi-sexual nature of the fertilized human egg, fusion of the male and female nuclei, the complex cycle of events resulting in a division of this nuclear result, cleavage or division of the fertilized egg cell first into two similar cells and then through a long series of divisions into successive groups of cells each a multiple of the preceding group, the gradual differentiation of these groups into layers, are among the earliest stages of development observed in all the higher animals and, therefore, are assumed to occur in man. Three layers of embryonic tissues now may be recognized: The ectodermal (outer layer), formed from cells nearest the upper pole of the egg and entering into the development of the outer layer of the skin, the sensory epithelium and the nervous system; the entodermal (inner layer), from which arises the lining of the digestive and respiratory tracts; and the middle or mesodermal

⁵ Morgan, T. H., *The Physical Basis of Heredity*, Philadelphia, 1919.

cells, in the human embryo lying between the upper and lower poles and producing the skeleton, muscles, blood vessels and urogenital organs. Each of these layers tends to split or cleave with the utmost exactness.

PRENATAL FACTORS

Since each of the embryonic layers at this stage of development is built up of comparatively few cells, subdivisions of which are destined to form and already are in process of forming separate bodily organs, and since each infinitesimal group has its microscopic dimensions irrevocably defined, departures from which intrude upon the dominions of other embryonic organs adjusted with equal sensitiveness, it is clear that only a rigid course of developmental phenomena can produce superior results. Too little recognition is given to the fundamental social importance of adequate maternal health during pregnancy and especially during the earliest stages of prenatal development. Zoölogists affirm that in order to get usual or comparative results in rearing lower organisms a uniform, stable environment is necessary. In its earliest stages the human organism is microscopic in size and highly complex in structure. It appears rational to judge from observations on the results of inadequate environment on other animals that the human animal likewise is affected from unwholesome substances circulating in the embryonic pabulum, poisons sufficiently potent to interfere with the usual course of development and able to initiate unusual and imperfectly differentiated structures. The response of these incompetent mechanisms functionally is inadequate, often explaining the organism's social inefficiency. Biological analyses of social problems confirms the inference that many cases of economic inferiority are developmental in origin and are responsive, therefore, to environmental treatment. Their germ-plasm is unimpaired although their own structural development is of poor functional capacity. The offspring of such parents may develop, under suitable conditions, the full potentialities of the family stock.

Alcoholism, syphilis, tuberculosis, lead poisoning, the morbid manifestations of rickets, pellagra, beri-beri and other deficiency diseases, dietetic and otherwise, are among the chemical agencies of the external environment that may interfere profoundly with the human organism during its period of intrauterine life.

HEREDITY AND DEVELOPMENT

Analysis of social problems from a biological point of view generally contrasts the two fundamental principles of heredity and development. Substantiating inferences and observations that certain appearances in the offspring are inevitable and for the most part changeless consequences of parental tendencies indicate that the fertilized egg or embryo always must start its individual existence with some characteristics on which environmental influences seem powerless generally to act. Sex and color are two of the most obvious of these hereditary factors, each a subject of chance, apparently, at the moment of conjugation and changeless thereafter.

The second fundamental field is open to broader observation, the human subject here presenting an experimental problem in the growth and unfolding, i.e., the development, of its inherent possibilities, most of which are subjected to training and may show the effects of external influences.

In the analysis of social situations the question arises as to the basis of the defect. Is it an hereditary character or is it of developmental origin? Consequences momentous to the individual often hinge upon this answer. Take the question of inferior mentality, for example. If analysis of the history and the examination indicate an hereditary basis the subject's germinal capacity is judged impaired. The offspring of such parents probably possesses and will transmit the germinal defect. Careful selection in mating and surroundings may improve the situation yet the chances for the production of a superior organism are less probable than they would be if the defect were of developmental origin.

ILLUSTRATIVE CASE-HISTORY

The following case shows the practical bearing which the distinction between heredity and development may have in determining the basis of unusual tendencies.

A Russian Hebrew imbecile of seventeen years was temporarily admitted to an American port, her brothers pledging her support. During her several months stay she made a good adjustment, became partly self-supporting, learned English passably, was tractable, orderly, made friends and was eager to remain. Her family were

thrifty, responsible, understood her condition and wanted to care for her permanently.

Without systematic mental examination, after six months sojourn, she was ordered deported as a feeble-minded alien. In this decision the family history was given no consideration but much importance was attached to the girl's inability to respond accurately to dates, no allowance being made for racial peculiarities, familiar to students of anthropology, peculiarities showing Jewish irresponsibility toward modern chronology, with reliance upon feast days as the basis of their calendar.

There was no record of social or intellectual inferiority in any other members of the family during three preceding generations. Respected and successful, the men were mostly Hebrew teachers or in trade, the women all were well married. A number of deaths had occurred in infancy although there was no history of socially significant causes at any time. The family was remarkable for the longevity of its members. Except this girl all those living had married and were in good circumstances.

The family history clearly lacked evidence of hereditary tendencies toward social inferiority. Nor was there any suggestion of an unwholesome prenatal environment. The family circumstances were good, birth and early development were uneventful. The child walked and talked at the usual chronological age. "When three years old she had a fever and her tongue became paralyzed." No accurate causal evidence is available, but anterior poliomyelitis suggests itself. For the next few years her speech, gait and mental development progressed slowly. Meantime the family emigrating and recognizing her inferiority had left her well cared for in a foster home. Then newly established, the brothers hearing of the sister's improved condition arranged her journey to America.

Viewed from a civic standpoint the girl's original admission was imprudent. Her mentality was so inferior (I.C. .35) that, even without accurate examination, her dependency should have been recognized. Her response to social tests, however, showed her ability to rise above dependency. Therefore, since her character and health were satisfactory, justice and prudence would have been conserved by allowing the girl to stay with her family under guaranteed supervision.

Although historical evidence must lean heavily upon probability there is, nevertheless, no indication of hereditary incompetence nor of tendencies suggesting the production of feeble-minded offspring. Clinical evidence confirms the belief that the case is one of developmental defect following an acute infectious process. Although the subject of marriage undoubtedly never would arise in this case, even if it were to occur satisfactory offspring undoubtedly would result from a favorable mating with a dominant individual. Biological evidence would favor the view that the germ plasm of this person has not deteriorated.

ENVIRONMENT, INTERNAL AND EXTERNAL

In his embryonic existence man is a parasite for whose protection physiological energies prepare a nest of the most highly organized materials. Thereafter the developing organism utilizes two channels from which to supply its metabolic and social needs. As an intrinsic source may be mentioned the glandular, circulatory and neural structures serving as a constructive means for nourishment and nurture, a familiar representative being the thyroid gland, irregularities in whose function mirror changes in appearance and behavior. Serving in a similar capacity are the biological protective functions of the blood together with the reactive and integrative capacity of the nervous system, agencies representing hereditary sequels yet more or less sensitive to adjustment from surroundings.

More obvious than the internal biological regulators of the body itself and less highly integrated as parts of the vital mechanism are external physical, chemical and social agencies tending to nourish, protect and guide the organism. Among these light, sound and similar physical forces have remarkably stimulated the development of man's discriminative structures and functions. Such chemical harmonizers also as carbon dioxide, water and protective foods, and a small number of equally potent substances evoking fundamental appetites and needs, make the world the fittest possible abode for an organism developing an ever increasing degree of complexity in attaining a maximum of social organization. As an evolutionary consequence of cosmic phenomena man shares with other physical components of his environment, conforming to the theory that "space, time and matter are not independent concepts but are interwoven upon each other," in general probably satisfying

the conditions of electrical energy. The data of the external environment assume also the added responsibility of elucidating man's destiny, his time-binding power, as Korzybski has termed the world's civilizing energy contributed by mankind.

CONFLICTS AND PERSONALITY

In spite of environmental fitness,⁶ widely adaptable to individual needs, capable of extending hereditary possibilities far beyond their present general attainment, mankind revolts at its dictates and attempts to evade principles long since proved rational through countless trials and failures and final success. Overemphasized aggressiveness, uncontrolled appetites and wants, inability to organize harmoniously the social impulse are some of the manifestations of an imperfectly developed personality.

BIOLOGICAL TENDENCIES OR INSTINCTS

An important factor in explaining human situations, scientific analysis depends greatly upon an examination of ways found by nature, after long periods of experimental trial, best adapted to the satisfaction of man's needs. The physical state of the blood, its chemical function as a carrier of sensitive secretions such as adrenalin, thyroxin, etc.; fear, anger, desire for food and for sexual satisfaction, all are indispensable for existence and health. Observation soon leads to the conclusion that these primitive mechanisms or instincts developed by the organism for nourishing, protecting and reproducing itself automatically and later in its evolutionary history for the purpose of securing sympathy and group action and for bringing about a state of equilibrium between these tendencies and the forces of the community, are the elements of behavior and conduct. Clearly these forces or activities shown in the appetites and feelings and their further organization into the complex sentiments of love and hate as well as their further disorganization from suppression, dissociation or deterioration in their failure to secure social harmony, represent the rational data of social problems. Social syntheses deal mostly with these more or less complex biological mechanisms whose community relations elsewhere are considered under the topic Instinct and Conduct.

⁶ Henderson, L. J., *The Fitness of the Environment*, New York, 1913.

REPRODUCTION

Fulfilling man's clearest purpose—that of passing on, undimmed and steadier, the torch of life—reproduction possesses the strongest impulse of all biological needs and results in the most intensive experiences. As the probable motive of family organization and of marriage rites, children have been the stimulus in the evolution of the home, the ideal unit of society. Among intelligent persons of good character and health the sexual act is the consummation of all sound affective organization, the acme of mutual love, exalted in religious traditions.

Though probably not the sole cause of social disorganization, as Freud and his followers would have us believe, the sexual function is the most frequent source of biological conflicts exhibiting morbid thoughts and feelings. In the life of the intelligent but poorly balanced person the sexual factor may exert an important stabilizing influence, while in the unintelligent want of reproductive control often is the chief feature of their dependency.

Rational ethics now recognizes natural, bisexual union as a legitimate purpose in the organization of character as well as in the preservation of the race. As contributor to a legitimate instinctive need, as chief organizer of marital felicity, as the main unifying influence in the development of the sentiment of love from simpler elements of anger, fear, joy and sorrow, human reproduction bears a closer relation to society than any other element of character.

Since the parental germ-plasm of most stable persons undoubtedly is capable of far greater achievement than ordinarily is realized, greater effort and more intelligent direction are needed to furnish an ideal environment for its development. To hand on inviolate the ancestral germ-plasm, augmented in value, appears to offer the least selfish and the most rational basis for personal immortality.

THE HUMAN NEST

Notwithstanding the importance of its structural evolution and its comparative embryonic features, of even greater social significance are the conditions surrounding the human ovum. The female's contribution to generation usually is a single egg at each period of her menstrual cycle. If fertilized, at or soon after conjugation of male and female, by one of the many sperm cells introduced

by the male, development at once begins. The human embryo essentially is a parasite, its vital nest being attached to the interior of the mother's uterus or womb. On first thought this mechanism appears to ensure complete protection, superior to an arboreal environment. Wild nature, however, is no more destructive toward the unhatched bird than are noxious social forces toward the unformed child. A reserve of appropriate nourishment surrounds the avian embryo, supplied by the yolk of the egg, while the child must draw its sustenance from the mother's blood, the varying quality of which depends upon her emotional stability, her metabolic efficiency and her freedom from infectious and noxious agents. Physiological balance, cheerful mood and generally healthful state furnish an ideal environment for the development of a sensitive organism. Yet if any one of these factors is disordered a morbid state may be reflected in the mother's blood often inducing, during the early stages of pregnancy, anomalous development in structure and function.

Undoubtedly perpetuation of species, the fundamental purpose of reproduction, is accomplished more rationally by some of the lower animals than it is by man, since in their biological scheme the social instinct acts less energetically as a conditioning agent to more nearly fundamental tendencies. The reproductive needs and desires of a number of species lower than man react according to seasonal limitations, formerly a human characteristic as well, while sexual control is more thoroughly organized than when actuated by complex forces tending to suppress natural desires and interests. So far as known noxious processes such as human social diseases exercise no influence upon the reproduction of lower organisms, although tradition ascribes the origin of syphilis to such a source. Struggle for food is their most active eliminating force, although unimportant as a human agency for removing the unfit since altruistic efforts in administering to nutritional needs tend to prolong the existence of human defectives.

STAGES IN REPRODUCTIVE DEVELOPMENT

The individual who becomes adapted to his environment attains a well balanced control of his instinctive tendencies, chief among which are his ways of reacting to danger and to the sexual appetite. Although the reproductive, of the three primary groups of instincts,

is last to assert itself, from early infancy it forms an important part of the child's *libido* or crude want, an impulse at this stage of development to be interpreted merely as vital energy. From the *libido* eventually develop the three groups of fundamental, biological interests.

In the course of its bodily exploration the infant discovers, among other sensory areas, the genital zone, easily stimulated to pleasurable feeling. This circumstance is no more unnatural than for the child to discover its mouth as the hunger satisfyer, except that the latter impulse already has developed a definite meaning whereas the sex impulse in usual children at this stage of development results in no need ending in satisfaction. Unusual or poorly balanced individuals, however, may show precocious sexual activity even in infancy and frequently those somewhat older, suffering from uncleanliness or from physical defects, may continue toying with the genitalia until an apparently mature reaction establishes itself. Undue solicitude often is shown toward such children by teachers who interpret the habit as masturbation, an experience of mature individuals only, i.e., those in the stage of adolescence. In well balanced personalities the impulse of joy, the basis of play, early exercises a dominant influence upon the sound and well nourished child. Reproductive tendencies naturally dormant at this age remain subservient to other interests until aroused by the instinct of curiosity intensified temporarily by undue aggressiveness concomitant with an increased functional activity of the specific sex glands beginning in late childhood or early adolescence. In poorly developed children sexual feeling allied to the adult type may arise in infancy. Not until about eight years of age, however, is the full impulse experienced, and at this age neither sex usually is fertile. An example of this nature was seen in a seven year old girl (WJet 203) who sought mature youths to gratify a vehement desire admitted in contrite grief. She came from a long line of vagrants and prostitutes and was constitutionally and locally diseased. With the onset of puberty, indications of which appear in earlier behavior, the girl of eight and the boy of ten begin to inquire into the social relations of men and women. A variety of sound instinctive impulses such as curiosity aid in intensifying the vaguely felt reproductive motive, while personal episodes, prurient books, proximity of parents and children in crowded sleeping quarters, all tend to fortify this

keenly responsive mechanism. Play motives of a sexual nature frequently permeate childish games such as "fathers and mothers," a naive imitation of the parental experience. Such lapses in conduct generally are of benign significance as character influences in the usual child. Rationally analyzed the reproductive reaction at this stage of development, showing itself generally in episodes of touching the specific organs, is a natural biological experience to be expected and to be self-adjusted in the stable person. We assume unnatural sexual feeling generally in the ill-balanced individual yet often it is found to be adjustable under the influence of organized activities and interests.

In temperate climates the usual European girl begins ovulation at about fourteen years of age and the boy, if maturity is judged by the involuntary discharge of sperm cells, a number of years later. In neither sex does the human organism show a sufficiently close relation between reproductive function and structural development to ensure at this time adequate support of the offspring, a circumstance upon which is based sound traditions of marriageable age. Precocious bodily growth at twelve years of age, especially in the case of girls, often is associated with adult reproductive capacity, although mentality and character may show a natural immaturity. Estimates of social responsibility formerly characterized such behavior as moral imbecility, failing to recognize the condition as an expression of an unusual degree of reproductive energy whose resulting forces are not to be judged by usual standards. Personalities under stronger sexual impulses, even though possessing superior intelligence, often cannot organize and control their reproductive tendencies. Their ethical assurances, often sincere, are of little value unless closely supported by organizing influences conforming to interests, matrimonial, recreative or cultural. The Court's refusal to annul the marriage of a twelve-year old girl and a reputable bachelor of forty appeared thoroughly justified by the girl's history of physiological maturity at nine years of age, adult stature and weight of 160 pounds, fair intelligence, health and stable character save for intensive sexual desire. In such cases individual interests are in danger of being overwhelmed by shortsighted traditions prohibiting early marriage.

The adolescent stage of the human reproductive cycle extends to the end of life's second decade. Meantime contour, distribution

of hair, eruption of teeth and body size have become greatly modified. Character should now have become organized in most particulars, judgment and analytical ability should have improved and capacity to reproduce and care for offspring should have developed. In this process of growth and unification of the organism, various biological mechanisms take part and those emerging from attempts to bring the reproductive instinct into relation with the gregarious or social impulse are most closely related to community welfare. During adolescence dominance of aggressive, selfish and unsympathetic qualities in children hitherto affectionate and tractable is a frequent source of parental solicitude. Those perplexed should contrast the natural unrestraint long permitted animal tendencies as old as the species to which the child's involuntary nervous system intimately responds, with the control demanded by various unnatural conditions the result of civilization.

The adolescent attitude is well expressed in Rolland's *Âme Enchantée*:

Marc longed to conquer; to conquer what he understood and what he didn't understand—to conquer what he didn't know and what he hated. To conquer the enigma of the world and to conquer his own inferiority. Ah! here as elsewhere he was continuously conquered. In his efforts at working, at reading, at concentration, he lost his hold on himself, he felt as if he were running over. He lacked strength. Yet it was there, although hardly malleable; and quite unequal to its task and to his will. He was tormented with desire and curiosity, which harassed him on all sides—or he was overcome by a sort of torpor and incapable of doing anything or of settling upon anything. He wasted time, and he was more than busy. Already his future preoccupied him—for he knew he must make up his mind about it early—and he had no satisfaction in a possible decision. He floated above everything, with the same degree of interest and enthusiasm, of allurements and distaste. He wished and he didn't wish, he was not even capable of wishing or not wishing. The machine was not regulated. He flew at everything, he stopped short, or he stumbled and touched bottom.

Generally the phenomena of unbalanced instinctive tendencies in adolescence appear less morbid when viewed as manifestations of profound bodily rearrangements accompanying the change from chrysalis to imago. During this stage of development physico-chemical energies produced by the specific sex glands, by the thyroid, the adrenals and other glandular systems become unusually active. The resulting forces tend to unbalance behavior, producing natural antagonisms that lend themselves best to adjustment through analy-

sis and reason rather than by coercion. Certain fundamental social regulations, however, call for voluntary recognition and unquestioning responsibility; anger, for example, must not result in personal violence, fear in seclusion, curiosity in felony nor aggressiveness in tyranny. Hunger must earn its demands and, although biologically sound for the female to regard herself as the quarry, the inherently polygamous tendency of the male, and occasionally of the female, must be organized. Thus while the individual's innate needs ought to have prior claim to recognition they must be enjoyed unselfishly and so long as this attitude is maintained the individual is held to be socially responsible

Yet the young outlaw must have an opportunity to present his or her biological rights in the adoption of unusual tendencies, for social progress demands change if the commonplace, the result of selection only, is to be avoided and whether or not the unusual shall survive depends upon its ability to win popular approval. Creative ability appears to develop only in the atmosphere if not in the actual scene of conflict and the individual who has become completely adapted to his environment, the stable, normal person, does not fulfill the conditions of exceptional accomplishment. A certain degree of affective instability often accompanies uncommon intellectual endowment and is generally a mark of genius. It is specially during adolescence that the personality is likely to rebel and to develop emotional reactions from affective phenomena. If only a philosophical point of view can be recognized and utilized—if, for example, the place of the discarded chaperone can be taken by intelligently directed personal control—the result need not be debated. To furnish this philosophical and rational equipment is the function of education, toward which youth is more receptive on its part than its teachers are on their part to recognize the leavening value of unusual traits.

With the establishment of the function of reproduction, however, man is not relieved of the tension of conflict for the various social taboos surrounding this instinct bring it into constant prominence. Analyses of the personality show a number of important biological factors strikingly identified with this stage of greatest functional activity. Among these is the process of *Suppression*, a biological means utilized by the individual to subdue unpleasant tendencies incompatible with prevailing customs. When the result is successful

we say the unpleasant experience is "forgotten," a genuine estimate of its relation to voluntary consciousness but often oblivious of its possibilities as an involuntary agency of disorganization. *Sublimation*, too, is a biological instrument by which the energy arising from instinctive conflicts is diverted from channels leading to morbid nervous conditions and by processes of reëducation is turned toward art, science, religion, altruism and other cultural interests.

Anxieties over the discovery and obsessive tendencies of so-called obscene words harassing childhood; vicarious sex practices, common among animals wanting a basis for moral conflicts; religious prescriptions toward unmarried females; superstitions concerning woman's functional periodicity, a relic of demonistic philosophy, and various other forces with sex taboos all have a biological foundation and exert a strong influence upon human behavior and conduct.

Toward the reproductive syndrome the attitude of both sexes so often complicates the social situation that the biological interpretation of sexual feeling has become a rational inquiry.

The virile male, irrespective of his code of ethics, shows as a natural trait of behavior a responsive attitude toward feminine attractability. Although his advances may be of the most circumspect nature he is none the less the aggressor. As in other animal species the human female is the quarry. Jealousy of her inherent rights, a characteristic evolved from competition in modes of display, shows itself in eternal vigilance to exert powers of attraction. However potent suppressive measures may appear, fundamental parental tendencies, even in balanced women, are impossible of complete repression and, fortunately, are most difficult traits to sublimate. Yet with increased physical charm resulting from social organization woman's sexual coördination has diminished and fecundity has decreased. The sturdy cave-woman, reacting to seasonal impulse, with a variety of suitors, submitted to impregnation with the instinctive desire and impulse of the reproductive motive and with a corresponding intensity of feeling. Irrational standards of civilization have brought about physical deterioration and consequent reproductive inferiority. With the development of complex states of character, such as love and hate, a more sensitive ethical consciousness utilizing powerful taboos has not only gained control of but has induced evasion of reproduction. Actuated by sympathetic motives the male has developed a greater degree of sexual solicitude

for his mate, thereby still further weakening her primitive impulse. Thus the usual female response to reproductive interests of a socially legitimate nature partakes more of the sentiment of love and less of the fundamental feeling or instinctive appetite than does the response of the male, in whom the physical impulse functions with undiminished potency.

Discussions of sexual offences generally are biased by too great insistence upon personal beliefs. A report on prostitution in China, for example, says: "Chinese women as a whole are chaste; Chinese men are not, though they would compare favorably with American men." Such is the popular notion that chastity is purely an ethical quality, a symbol of superior womanhood. Noble as are some aspects of this ideal its fundamental principles are too insecure to make it a practical basis for social reform. Women are more chaste than men because it is their biological nature to be pursued, just as men tend toward promiscuity because "all men at heart are Mormons." It is a general zoological observation that the female of every species is less aggressive in her procreative demands than the male. The human species is no exception to this law. It requires excessive persuasive effort and the exhibition of much finery on the part of the male woodcock to stage his hymeneal dance, a phenomenon wellknown to ornithologists. The girl's submission, likewise, usually is accomplished only through the use of an extensive social armamentarium. Socially responsible parents organize for their offspring legitimate means toward reproductive consummation. This includes recreation, dress, social training, dowry and other suitable aids, factors inadequately furnished for the inferior members of the community.

Observations of sexual delinquency clearly suggest the impossibility of attempting its solution according to "moral" formulae alone. A sermon and a book of moral precepts does not satisfy the young prostitute wanting attractive dress and opportunity legitimately to exhibit herself. Her physical and moral cleansing requires first of all the use of public health and recreational agencies.

While reproductive tendencies are clearly defined in the conduct of the usual individual whose sexual needs and interests are well controlled, in the man or woman whose instinctive characteristics are poorly balanced sexual stimuli are more readily excited and less readily controlled. That the degree of sexual feeling varies in

personalities and is an important element of analysis is an observation too little appreciated. Whether the young person is driven to her extremity by the overactivity of natural, physiological mechanisms; whether curiosity to participate in the world's most consuming topic becomes her goad; whether her sexual motives result from vanity over dress, from resentment toward an intolerable home situation, from restlessness due to an ill-defined or unrecognized want, from a real desire for affectionate demonstration and the organization of the sentiment of love, or whether the most merciless of all impelling forces—hunger and want of shelter—dominate her will, it is the motive or well-spring of energy from which her forces or modes of behavior and conduct arise that should influence the exercise of censure. An unmarried girl, separated from her baby through stealthy and illegal means, was committed by a Court to a reformatory on the charge of prostitution. No attempt was made to establish a natural settlement of the case. Investigation showed: Wretched home, irregular relations with one youth only according to a long-standing marriage plan, economic selfishness and parental objection, fair mentality and instinctive balance on the part of the young couple, the boy being well settled on his own farm. Inability of the young people to solve the situation in the face of parental opposition was not unusual. The Court's willingness to concur in the social-medical recommendation resulted in the establishment of a normal home and family. Intensive observation finds the answer to the individual's future chiefly in a study of the biological tendencies upon which character is based. Various statements indicate that there are at least three well defined types of reaction to the sexual impulse in normal persons. A considerable number of women are impelled by the same degree of sexual hunger that drives the male to overcome all obstacles toward the fulfilment of sexual desire, while at the other extreme are some whose complete sexual frigidity is undoubtedly due to unusual organic conditions or unhygienic attitudes. Motives other than the mere gratification of sexual feeling generally predominate. As a climax in the organization of love, woman recognizes her biological obligation and permits herself to be persuaded to rise to an equal level of coöperative capacity with her partner. This represents the usual reaction. At a lower level of instinctive organization love as the prime object of reproductive activity may be supplanted by inferior ethical motives and the

woman may find her compensation in money, food, apparel or recreational pleasure. If the girl could secure through a legitimate agency the object of her desires often she would not stoop to illegitimate methods to obtain it. Nevertheless, chastity is a condition largely depending upon individual control of reproductive functions and estimates of its quality need to consider the type of personality involved.

Recognizing biological principles as the basis of our ethics we are slowly coming to see that the best method of organizing the reproductive impulse among girls of the lower social strata is by helping them to supply themselves with opportunities for legitimate sexual organization; with a tolerable amount of food, raiment, shelter and wholesome recreational activities. Their living conditions must correspond relatively, in fundamental features at least, with those of the well-bred girl in whom chastity functions as an expression of social satisfaction afforded by legitimate ministration to fundamental needs and wants.

Of all avenues of approach to the conflict between reproductive and social tendencies the one offering at the present time the broadest perspective appears to be that through which youth is passing to take command of new positions developing on the sites of deteriorated traditions. Candidly this means the evolution of a closer comradeship between men and women, based on sexual desires more equally distributed between the sexes, with a more intensive physical development and a higher spiritual organization, casting into the discard the exploded notion that human sexual contact has for its sole purpose reproduction. While a single standard of morals is to be insisted upon for both men and women it must be recognized that at the present time the sexes do not share this responsibility equally, the burden falling far more heavily on the continent male. This is a natural result of the biological character of the one who physically must be the aggressor. The contention that uncontrolled indulgence is an animal propensity is the antithesis of scientific observation. The sexual behavior of animals, especially those of a monogamous type, is, almost without exception, controlled by cycles of activity exhibiting a degree of continence unknown to man. Sexual union reaches its highest function in the human organism when it serves to integrate more closely fundamental appetites and feelings as these become compounded into the great sentiment of

love, a distinctly human attribute. Whatever contributes, therefore, to evolve from the "ladylike" type of Victorian neurasthenic—whose deterioration was due largely to masculine ideas of feminine inferiority—a higher model of comrade, is worthy of widest adoption. Physical development, the result of less "fancy-work" and more "hiking," better glandular functioning as an accompaniment of this physical vigor, self-reliance, with higher ideals based upon wholesome hygiene and less need of antiquated methods of chaperonage; athletic interests and bodily attractiveness with intellectual fire that will hold firmly the attachment of a husband however virile, with a consequent decrease in the activities of our divorce courts; these are some of the effects to be gained if our present belligerent youth can be induced to organize intelligently the forces that are seeking wider expression. Biology recognizes this epoch as an opportune time for reviewing traditions, some of which are falling into decay, and for encouraging such traditions to continue their decline.

In discussions of the "mental hygiene" or the social attitude of society toward problems of human reproduction the fundamental point to be borne in mind is that we are dealing with an inherent force that will always be more or less in conflict with tradition. Differences of opinion as to the manner of meeting the situation too often result in classifying the individual involved as "good" or "bad." It is unjust to condemn youth outright because it differs with age in the interpretation of instinctive activities over which there always has hung the smoke of battle. Coercion rarely leads to the establishment of a wholesome attitude. Training and education, utilizing newly evolved points of view, are permanently constructive.

CHAPTER VI

PSYCHOLOGY AND SOCIAL PROBLEMS

SCIENTIFIC DEVELOPMENT

Although a long stage of philosophical development justifies psychology's claim to a history extending over many centuries, with Aristotle as an expounder, it still is in swaddling clothes as an experimental science. Even William James referred to psychology as "a nasty little subject," yet contributions to the study of mental phenomena have influenced greatly our conceptions of the processes of thought. While classical allies gave its practice a biological trend mediaeval followers emphasized chiefly its contemplative features.

A recent rapprochement with the practice of social analysis in educational, vocational and therapeutic fields has popularized the subject unduly and has not in general tended to strengthen the scope of its systematic study. This precocious growth has resulted in false situations. Attempts have been made to utilize psychology in the solution of most physical ills and social complaints. In the hands of overzealous devotees legitimate purposes often have faded into a haze of incoherent notions. In its own field also psychology has suffered mutilation at the hands of rival theorists.

As an introspective science, however, attending to thought and its organization, psychology has contributed means for the clinical estimation of mental capacity, it has taught us to recognize individual differences in the processes of learning and has been instrumental in pointing out fundamental sources of culture. Sporadic attempts to confine its efforts more generally to the field of behavior sometimes have resulted, in dilute, biological deductions. Yet as a clinical instrument in the subjective examination of the personality it has fortified the behavioristic fields of biology and psychiatry and contributed original data from the domain of organized conduct.

DEFINITION

Probably the term psychology could not better be defined than by using its original Greek derivatives ($\psi\chi\eta$ soul or mind, and $\lambda\omicron\gamma\acute{o}s$

that which is said about it) to indicate an organized study of the functions of thinking and of acting rationally. When we are willing to recognize "that pious ghost termed the soul" as a physical mechanism, capable of the less exalted but more honest rôle of electrical servant, we shall be able more thoroughly to utilize psychology as an ethical organizer or religious instrument. In such a manner psychophysical phenomena observed as emotions already have been able to demonstrate the organic unity of mind and body and to emphasize the fact that "the cure of souls" is a psychological study with a biological basis, frequently possessing a medical background where, although the healing of the "spirit" is primary, the welfare of the body is a closely related secondary principle.

NERVOUS STRUCTURE

Man's nervous system, that remarkable product resulting from the action of organic evolution upon various primitive mechanisms designed to effect voluntary control, traces its earliest appearance to preservative efforts arising in the muscle cells themselves. The first stride in development occurred when, among the organism's rudimentary structures concerned with the fundamental need of securing food, a *sensory* ability appeared among certain cells able to receive and respond to pressure changes and to chemical variations represented by light and heat. Thus emerged the beginnings of hearing and sight, agencies furnishing a better adjustment to the environment. From this sensory ability arose a network of unorganized, primitive nerve cells wherein dwelt the germ of the present central, nervous system, whose impulses now follow definite paths, inward and outward, serving special organs and muscles.

In the course of human development the brain is seen to have evolved from these nerve-net cells retreating from the exposed surface of the primitive animal to the deeper protection now afforded vertebrates by the skull and spinal column. During its evolution, as larger and more sensitive nerve structures have arisen, the central nervous system has developed nerve fibres to connect and to assist in integrating its various component parts. Together with its fibres, each of the myriad nerve cells constitutes a unit or *neurone*, the more primitive type of which links the central organ or brain with the organ or structure to be directed. Nervous connections of a later type of development join adjacent as well as remote areas

of the brain itself, thereby encouraging an almost infinite number of combinations or possible associations of reactions which represent the experiences of the organism.

Neurones respond by physical and chemical manifestations, with electrical susceptibility, exerted through the adjustable junctions of contiguous cells. Disconnection of cells is induced automatically when too prolonged external stimulation might induce excessive fatigue or a similar danger to their delicate structure.

Perfection in the human nervous system has been accomplished from the integration of such primitive nervous mechanisms and structures as now form the brain, whose rudimentary elements previously had become adapted to the demands of a simpler environment possessing mainly vegetative conditions. From this multiple structure has evolved our unique thinking and coordinating apparatus, contributing to whose versatility are the various receiving mechanisms for the collection of surrounding experiences adaptable to life's purposes. These sensory reactions such as sights, sounds, tastes and odors all subserve and reinforce the central, analyzing organ.

MENTAL DEVELOPMENT

Mental capacity or teachability seems to be clearly related to the quality and quantity of the neurone, whose cellular elements at least are all present at birth. However, the branching connections as well as the responsive tendencies toward the formation of new habits have to be acquired throughout life. This unfolding process, this ability to learn and to acquire new habits, may be arrested by disease or may, at an *early* period in our growth, reach its hereditary limitation, leaving the individual at a more or less helpless stage of mental development, inferior to the expectancy of his physical size and chronological age.

When our mental structure follows its usual course of development its annual rate of increase rapidly diminishes from about the fifth year onward. According to psychological observations mental ability in a structural sense increases by more than 50 per cent during the fourth year of life; during the fifth year by scarcely more than 30 per cent; during the seventh year by approximately 15 per cent. Its development afterward is less rapid until in the thirteenth year the increase is only about 5 per cent. Between sixteen and

eighteen years the increase is slight and irregular, ceasing almost entirely at about eighteen years. Histological studies further emphasize this point of view.¹

If these deductions interpret the actual processes of growth our mental equipment, so far as its structural features are concerned, is complete at essentially sixteen years of age.² On the other hand functional development or training pursues an opposite course, inasmuch as judgment and analytical ability have scarcely started at five years of age while in most cases they are little more than oriented in the personality of the eighteen year old person.

This interpretation of the course of structural development is taken advantage of in attempts to apply quantitative estimates to mentality, the maximum of which is placed at eighteen years irrespective of the individual's chronological age, however advanced. The astonishment occasionally produced by social reformers who emphasize a mental age of thirteen years as if they were comparing it with an attainable intelligence of forty would be considerably mitigated by an accompanying explanation that "*normal*" intellectual capacity generally is rated at a maximum of about sixteen years when estimated by "*intelligence tests*" in current use.

SCOPE OF SUBJECT

Observations from clinical experience show that psychology helps most in the solution of social problems when it confines its attention to estimating the quickness possessed by the individual in seeing things as they are and to his ways of applying this result to practical action. Voluntary descriptions by the individual showing: how he gathers sensory experiences; the impression they make upon his personality; what is his method of associating ideas; his ability to recall, to think and to learn; a comparative estimate of his capacity to respond to objective tests together with his account of "how he does it," and in addition whatever haunts the psycho-biological borderland between voluntary, aware, or conscious and involuntary or unaware states and phenomena, all are of clinical assistance to Social Medicine. The data of introspection or self-analysis applied to sensory experiences and ideas appear to furnish a rational basis

¹ Mott, F. W., *Nature and Nurture in Mental Development*, London, 1914.

² Yerkes and Wood, *Methods of Expressing Results*, Bul. Mass. Com. Ment. Dis., Vol. I, 1917, p. 107.

for psychological investigation, just as feelings or affective phenomena enlarge our psycho-biologic or psychiatric viewpoint, and descriptions of aches and pains point the way to medical diagnosis.

While it is essential for all studies of mental phenomena to recognize their dependence upon such neurological concepts as the reflex arc, the fundamental unit in nervous reactions, whose ability to adapt itself to new conditions has furnished an excuse for psychological encroachments upon the field of biology, and while the close physiological relation between the system of endocrine glands, the involuntary nervous system and episodes of behavior must be borne in mind, nevertheless, as pointed out by Pawlow,³ it is difficult to see how the science of psychology as it is organized now can investigate and systematize the *fundamental* mechanisms of the higher nervous functions when "its followers are not yet agreed concerning the general postulates, tasks and methods of investigation which it is best to follow."

Permitting physics and biology to furnish its foundation, psychology might well confine its contribution to data by means of which social practice may compare or weigh personal qualifications in thinking and acting reasonably. Thus indeed it has already become responsible for the more nearly exact results now applied to the grading of human responsibility as compared with the earlier notion that all degrees of mental mediocrity indicate "feeble-mindedness" and that conduct justifies no closer scrutiny than that resulting from beliefs in "good" or "bad" appearances.

Following this trend it may be held that some of the more important contributions of psychology to the field of preventive science are: (a) Methods of estimating mental capacity; (b) Investigations of individual aptitudes, handicaps, interests and needs; (c) Assistance in explaining the factors of mental disorganization.

APPLICATION OF PSYCHOLOGY TO SOCIAL CLASSIFICATION

The "normal" individual or he who conforms satisfactorily to the usages and traditions of his group, usually serves as the comparative unit in social classifications. In order to meet this criterion he must be able to comprehend, and the better he does this the higher does

³ Pawlow, I., Investigations of the Higher Nervous Functions, Brit. Med. Jour., 1913, p. 973.

he elevate the standard of normality. Descriptive expressions such as imbecile, simpleton, moron, feeble-minded, insane—terms generally unsuited to exact estimates—hitherto have served to differentiate groups in pseudo-scientific schemes whose loose method of defining causes and effects has provided a perennial source of legal controversy. To the solution of this difficulty intelligence, or quickness in seeing things as they are, has furnished the most nearly satisfactory foundation upon which to build a rational method of grouping society. Hitherto popular descriptive terms have been given scientific recognition for want of a more nearly exact mode of defining different levels of intelligence. Until psychological experimentation had developed our present methods the individual was assigned to his appropriate group largely by descriptions of his appearance in action. The results were so inadequate that the subject of diagnosis in mental defectiveness became more or less a laughing stock. Now, however, a technique is becoming established whereby an essentially accurate, comparative estimate of individual mental characteristics may be expressed mathematically and interpreted in terms of social efficiency. Utilizing such data our social classifications become less an expression of personal beliefs and are available for statistical analysis.

Although in its progressive development the animal kingdom has evolved an increasingly complex nervous mechanism it has dispensed with none of the simpler structures adequate in satisfying more primitive needs. Such relics have not been cast off but have been retained, modified, unified and brought under the supervision of the cerebral hierarchy concerned with thought. This restraint, imposed by bringing under control our vegetative impulses toward mere existence is the beginning of "will."

The human organism has the fundamental needs and many of the interests inherent in animals of inferior development. An increasing capacity to make these factors socially harmonious is due to our unique associative and analyzing apparatus. Through his almost limitless combinations of nervous adjustments man is able to organize, with great ingenuity, his instinctive or biological tendencies, the consequences of whose need of social control are brought to his awareness by means of his psychological or introspective mechanisms, introspection being defined as "the direct observation of one's own mental processes."

INTROSPECTIVE TECHNIQUE

Psychological processes involved in this self-examination are: (1) sensitiveness to surrounding impressions affecting organic surfaces responsive to various stimuli such as light, sound, pressure, and other forms of physical energy, (2) interpretation of these organic experiences in terms of social purpose, thus giving rise to "perceptions;" (3) connecting or associating these with other experiences, remembered or imagined; (4) analyzing or reasoning in order to adjudge the whole situation preparatory to action.

Such a clinical analysis leads to the discovery of the mental components of our specific needs, aptitudes and interests. It points to variations and differences, unusual abilities and special handicaps not only in the mentally inferior but also in those of creative capacity. While to the great mass of normal or commonplace people, who stabilize society by adherence to tradition and reluctance toward novel though often progressive ideas, to whom a pseudo-scientific claptrap appeals, "psychological gold brick schemes" furnish an endless, if somewhat doubtful, source of culture. Individuals not exceptionally dull yet handicapped in their comprehension of the economic, to say nothing of the cultural, advantage of making action depend upon thought; likewise those of limited general intelligence but with originality in special fields such as craftsmanship, are among the most frequent problems referred for psychological diagnosis.

The investigation of unusual psychological types emphasizes an important philosophical point of view relating to their evolutionary value, since they may represent organic strains or social trends of cultural significance. Even mental inability to measure up to our present norm has been suggested as a protective mechanism against an increasing tendency toward acquired psycho-neuroses.

Public school and industrial groups offer the best opportunities for the investigation of special abilities and disabilities. Unusual modes of learning on the one hand from lessons seen or in other instances from lessons heard, combined with an effort to shape the word to the speech mechanism, exemplify such handicaps. Psychological prognosis also is required in cases showing mental retardation, yet with a capacity for further intellectual development under suitable surroundings. Congenital word blindness, an anomalous condition frequently suggested first by the appearance of a definite handicap in reading, is psychological in treatment if not in diagnosis.

In determining vocational aptitudes psychology, likewise, contributes to our estimate of individual capacity as well as to analyses of complex manufacturing and trade processes. Employment counsellors recognize intellectual assets in ideation or clear thinking as one of the prime factors in executive ability. Sustained attention, also, is equally important as a measure of reliability, and so is memory in putting order into a mass of associated ideas.

Protection from harm, satisfaction of appetites and various other primitive needs have come to represent an automatic function of the involuntary nervous system. On this foundation the human organism has reared its control station with its analyzing and thinking apparatus for the organization of the body's archaic responses according to social demands. Interference with the freedom of these motives, evolved for selfish purposes, engenders complexes, or systems of emotionally-toned ideas, as a natural result of the excitement arising from the clash of animal appetites and feelings when intelligence strives to alter their course of action. Resenting forced restraint, our biological tendencies frequently break forth into episodes of disorganized behavior or at other times assume a state of indifference interfering with the usual course of conduct.

Manifestly the task of unravelling such complex situations is more than a psychological project, although as such it frequently is undertaken. Most observers emphasize the biological features of unusual nervous states and recommend their consideration as psychiatric elements of the problem.⁴ Nevertheless introspective mechanisms play an important part even in the psychiatric examination. Confronted by an anxiety episode arising from a conflict that may lead in an antisocial direction the subject's instinctive reorganization may come off victorious by utilizing the process of "sublimation" or re-education through the mind's deliberate adoption of a rationally selected course of action, the result of *intelligent* deliberation and thus a legitimate object of psychological concern. Wanting this high degree of control or will to act the conflict may be settled by the behavioristic mechanism of "suppression," the contestants avoiding each other, each pursuing its own course, untroubled by the disharmony. This pretense tends, however, toward abnormal states of conduct in which elements of self-control are lost and the resulting

⁴ Rivers, W. H. R., *Instinct and the Unconscious*, Cambridge, 1920.

mental dissociation may lead to the victory of biological tendencies. Under these conditions the complex may be banished or repressed from *voluntary* consideration yet assert itself during sleep and in other states of unawareness. Thus it may become an offending obstacle to the orderly processes of thought as they seek rest. Denied satisfaction such conflicts frequently express themselves as fantasies and day dreams or as other neurotic phenomena of mis-directed energy. In all these situations awareness, the field of introspective technique, enters as an element of analysis.

The phenomena of "insanity," likewise, are made clearer when their psychological components are acknowledged and voluntary processes such as sensory tendencies, images and ideas are allowed to make their legitimate contribution to the problem.⁵ While the *quantity* of intelligence may be submitted to technical estimates to determine whether dullness is due to permanent mental incapacity or merely to retardation in development, its *quality* also may be examined introspectively for processes of deterioration resulting in dementia. Psychology goes even farther and helps explain states of irrational excitement, depression and apathy whose false sense impressions, misinterpretations, groundless beliefs and other mental deviations help to cloud the hallucinated and deluded mind (illusions—false ideas with objective basis, hallucinations—false ideas without objective basis, delusions—false interpretations). Interference with memory, distracted attention, absurd valuations of commonplace ideas or insistence upon those of highly fantastic content, inability to view in proper perspective matters favoring too little of the social and too much of the morbidly private in such disorganized mental states as schizophrenia (splitting of the personality), are examples of disorders needing psychological interpretations.

The foregoing examples indicate some of the principles of psychological diagnosis in abnormal mental states. Generally the situation represents either a poorly balanced relation between psychobiologic energies and allied organs or a more or less complete disconnection of these mechanisms with the central organ or brain.

⁵ Hart, Bernard, *The Psychology of Isanity*, Cambridge, 1916.

SUMMARY`

Summarized, our estimate of psychology as a technical instrument in the clinical analysis of the personality upholds its use to determine social responsibility, where it points out the quality and quantity of *thought* processes. Further scientific investigation in the development of fundamental, biological tendencies upon which psychology is based, comes within the province of physiology, while the trends of these tendencies to follow unusual though socially responsible courses—seen in the unbalanced character of the “constitutionally inferior” person—and the irresponsible interpretations of ideas seen in “insanity,” come within the province of psychiatry.

CHAPTER VII

GENERAL AND PREVENTIVE MEDICINE AND SOCIAL PROBLEMS

SCOPE

The art of restoring and preserving health by means of remedial substances and methods is the legitimate province of General and Preventive Medicine. Compassion for discomfort is the immediate *raison d'être* of therapeutics but the removal of an economic handicap is its essential motive. Pathology, the science of suffering or disease, has elevated its subject from the domain of the conjurer to the clearer though colder light of the laboratory. Unfortunately, however, general culture has not kept pace with research and a rational interpretation of cures. Man's fear and suggestibility still are too easily roused to hope for an expeditious elimination of magical beliefs, and the popular demand for remedies is too persistent to develop professional candor. Belief in the efficacy of nostrums is so general that medical ethics properly is obligated to respect, as a more or less rational step in cultural development, utilization of placebos, looking forward, ultimately, to a better degree of understanding through education. Yet though treatment tends to relieve mental and physical anguish, restoration to health is accomplished chiefly by the remarkable recuperative powers of the organism's biological mechanisms and the results usually are credited to therapeutic practice.

HEALTH HANDICAPS

A number of pathological conditions giving the human organism a hard struggle for supremacy and often constituting physical handicaps temporarily or permanently interfering with the individual's economic status are intimately related to Social Medicine. Among such disorders are:

- Venereal disease
- Cancer
- Tuberculosis
- Alcoholism
- Cripplehood

Chronic heart disease
Deafness
Blindness
Drug addiction
Occupational disabilities
Parasitic and bacterial infestations and invasions
Disordered metabolism and chronic toxemia
Unstable personality (constitutional inferiority)
Mental disorganization

VENEREAL DISEASE

Syphilis or lues was held by Osler to be the chief actual cause of death from individual disease. Sir Arthur Newsholme¹ counts it certainly one of the first four diseases of importance to vital statistics. This high mortality rate is clearer when we recognize general paralysis, locomotor ataxia, and aneurism to be of syphilitic origin. And when we include under the topic Venereal Disease infections by the Neisser organism, the cause of gonorrhoeal disorders leading to surgical treatment and so often inducing sterility, social incapacity from blindness, and other results of a pathological nature, we see that here we are discussing energies too active to be adjusted by the body mechanisms alone. The problem of venereal disease, therefore, becomes a subject best dealt with by General Medicine and Social Medicine jointly, they realizing the greater importance of its public health than of its ethical features yet recognizing that correction can come only from united efforts.

That various factors have effected a diminution in the incidence of venereal disease during recent years is generally conceded by competent observers. Chief among these factors seem to be educational publicity and the more general use of chemical prophylaxis. During the past decade also the question of diagnosis—biological, chemical, psychological and medical—has been placed on a firmer basis. Not only are means of discovering pathological conditions more intensively employed but the social ramifications of the subject are also better recognized in their proper setting. Health policies now are not satisfied to treat the patient only but insist upon exhuming all contacts or collateral infections, especially among children with congenital syphilis, i.e., those who have acquired the disease prior to or during birth.

¹ Newsholme, Sir Arthur, *Vital Statistics*, London, 1923.

Moreover the training of children to understand the positive and negative forces of reproduction is becoming more effective. Instruction of youth in the results of infection and means toward its avoidance sometimes have been obscured by moral issues about chastity and inadequate views concerning "sex education." But while the latter topic may be related to public health, the venereal question fundamentally is one of personal hygiene in its relation to infectious phenomena, to be presented in the school curriculum to each individual during early adolescence, as a topic in the course on *general* infection and immunity. If a rational plan of instruction in physiology has been followed the biological processes of reproduction already will have become familiar to the child as a natural part of his scientific equipment without the necessity of stressing their human characteristics.

The education of parents in giving more nearly adequate supervision to the reproductive tendencies of their children also is tending to improve sexual control. Moreover clinical instruction to adults in the pathology of venereal disorders is of great value in instituting early and systematic treatment in place of that hawked by the charlatan.

Greater importance should be attached to a thorough clinical examination of all problem children, especially girls, with whom welfare agencies are charged, and a bacteriological and blood examination should be required in essentially every case. Not until the clinical worker has been taught by needless extension, both organic and social, of disease will he recognize the frequency with which infections, especially gonorrhoeal, are overlooked in the usual dispensary practice. While the family group is more susceptible to infection the community is hardly less immune from disease contracted through extragenital or "innocent" methods. Various historical accounts record such transmission between nurse and suckling, lover and sweetheart and by those surrounded by filth and unsanitary conditions. Scepticism of extragenital infections, although by no means groundless, diminishes as one's professional experience matures.

What has been said of syphilis concerning its social effects on the individual and his family applies equally to its associate, gonorrhoea. The dangers of contagion, the cost to society for medical and social care, the loss of economic productivity in industry, the difficulties

of dealing with the blind, all help to emphasize its social-medical importance.

CANCER

Even more helpless to resist cancer than either of the other great death dealing diseases the human organism suffers here essentially a complete handicap, although of shorter duration. In syphilis and tuberculosis the specific cause is known, reliable diagnostic methods are at hand, treatment gives fair assurance of success, at least in arresting the disease, and a public health plan of control and prevention of infection is clearly prescribed. But the cancer problem receives scant hope from general medicine except that given by surgery in the earliest stages of the disease.

Although little is known of its genesis cancer appears to arise *de novo* and not by transmission from man to man. Thus we cannot expect soon to control the disease by preventing exposure to infection. Recent experimental work appears to indicate that multiple agencies contribute to the causation of cancer and that they are operative over a number of years, during which we have no laboratory means of making a diagnosis until often it is too late for surgical aid. Even if this treatment is undertaken it leaves the person disfigured or more or less crippled with no definite promise of successfully arresting the disease.

There is much evidence to support the conclusion that cancer is an unusual cause of death among uncivilized people. Whether this is a result of primitive simplicity, a less generous dietary, unobstructive clothing, and exemption from coal smoke, overheated dwellings and other irritants of civilization is uncertain. It is important at least to contrast this negative condition with its opposite among civilized people where cancer heads the list of the causes of death and everywhere shows a definite increase in incidence. Although the immediate sources of the disturbance are not yet ascertained it does seem clear that the conditioning factors in its development act as chronic irritants. Hence the importance so far as possible of avoiding habits tending to disturb wholesome biological adaptations of the body in its nutritive, reproductive and character forming functions.

In the analysis of its social relations it sometimes is necessary to consider the proportion of deaths occurring from cancer in each period of life. The disease is essentially one attacking those of

mature age, and we find less than 0.5 per cent of deaths in individuals under twenty-five years of age and less than 9 per cent in those under forty-five. Over 50 per cent occur between the ages of forty-five and sixty-five and more than 40 per cent after the age of sixty-five.

Probably there is no disease so often associated with unscrupulous and futile methods for relief as cancer. Immediate diagnosis and surgical treatment, the two important factors in reducing mortality, should be held rigidly to account in combatting this serious menace to health and life.

TUBERCULOSIS

Of the three great death-dealing diseases intimately associated with social competition, phthisis, consumption or tuberculosis shows most the effects of public health and social welfare measures directed toward its elimination. Having at their disposal the vigor of youthful vitality remedial activities show a greater potency toward this disease, since its attack in 75 per cent of cases is aimed at those under forty-five. Nearly 20 per cent of its force is expended on children under five years of age and over 35 per cent of its deaths occur between young adulthood and early middle-life. Scarcely 4 per cent of the population over sixty-five years old succumb to its ravages. The decline in the tuberculosis death rate from 195.2 per 100,000 to about 95 during the past generation and the estimated further reduction to not more than 50 in the next decade, indicate the basis for hope that as an economic handicap "consumption" has been essentially conquered. While environment and care undoubtedly are the two factors mainly responsible for improvement in mortality rates, natural selection toward a more nearly immune and resistant population and a gradual deterioration in the viability of the pathogenic organism have played an important rôle in the eradication of phthisis.

In the usual population a third more males than females die of this disease and the rural population has the lowest rate among occupational groups. In general those having the highest death rate from tuberculosis are workers exposed to mineral and metallic dust. Moreover it now is clear that the air of apartments occupied by consumptive patients is loaded with virulence. But apart from industrial dusts and disease-contaminated air, dust in any form when inhaled continuously and in considerable quantities is prejudicial

to health because of its mechanically destructive properties toward the delicate respiratory apparatus. Housing inspection through departments of health and industrial inspection of factories, cars and public buildings ought therefore to be further developed. The good results of sanatorium care may be extended through more complete utilization of diagnostic and social service agencies. The public school, also one of the most important of prophylactic centers has wide opportunities for constructive advice based upon frequent observations of weight, temperature and physical vigor. These forces also should lend support to further projects of prevention.

Although much stress has been placed in some quarters upon the influence of heredity, inadequate dietaries, alcoholism, poverty and vice in the tuberculous situation, the strongest evidence substantiates the belief that it is only by annihilating the germ (as has been accomplished in England in the case of rabies) that the disease eventually will be stamped out.

Calmette's² latest statement of principles sums up the basis for prophylaxis as follows: Infection is distributed throughout the civilized world. The disease generally is compatible with the appearance of health and frequently may remain as a benign, parasitic condition. It is the massive infection in children and young adults, free from previous infection, that is most rapidly fatal. The mild, early infections, developing the organism's resistance and tendency to rid itself of the invader, slowly in many cases, encroaches upon this resistance, although the results are not rapidly fatal. Here the greatest danger is in the scattering of infectious elements through the environment. So completely is this done that beyond fifteen years scarcely 5 per cent of the total population has succeeded wholly in escaping contamination. Danger to the uninfected lies in mass inoculation and to those with a latent infection in repeated superinfections. In either case the community aim should be to dry up the sources of infection, a task depending upon the combined efforts of social, pathological and public health agencies.

ALCOHOLISM

Although chronic alcoholism often causes death, either directly or through the induction of disease of the liver or other organs, it is

² Calmette, Albert, *Tubercle Bacillus Infection*, tr., Baltimore, 1923.

not so much with its lethal properties that we are concerned socially as with its activity as an agent of economic incapacity. As an important factor in cases of "non-support," as a symptom of social instability, and as a leading element in poverty "drink," prior to our National Prohibition Act, was the most refractory foe in the struggle for social welfare.

The use of narcotic beverages, universal, among mankind, is a result of the social instinct, in whose religious ceremonial evidently it arose. Alcohol has undoubtedly been of great importance in fostering social characteristics, e.g., drinking and praying, drinking and negotiating, drinking before fighting, etc., and here its chief function has been to intoxicate. Its inherent motive, however, is an expression of the deep seated *narcotic impulse*, a fundamental desire to revert to a more primitive state of responsibility when caught in a culpable situation. Associated with relaxation, recreation and relief from toil and trouble, the subject anticipates escape from the struggle of social competition.

Two general types of personality, according to Partridge,³ acquire this habit of narcotism: (a) The undeveloped, adolescent individual, in whom the phenomenon grows out of a normal desire for intensive experiences, emotional satisfaction and novel scenes. Here it soon may become established as a habit or as a disease if hereditary tendencies and environmental influences—one or both—favor this type of development. (b) The unbalanced or morbid person, a product of degeneracy, whose instinctive tendency seeks ease from distress, fatigue and pain which are generally overstressed as medical reasons for the need of alcohol. The latter type reaches its height of frequency in the early mid-adult stage of life when customary interests are beginning to decline and sexual capacity is on the wane.

From a therapeutic standpoint there are morbid conditions in which the benefit derived from the administration of alcohol seems clear and points to its curative action. However it is a specific for nothing and there are equally efficient remedies for every disease for which alcohol is prescribed. It has been shown that alcohol is a real food in the physiological sense, yet it has never appeared that there are no other substances of equal nutritive value to take its place. While it may be a physiological and social aid to digestion,

³ Partridge, G. E., *Studies in the Psychology of Intemperance*, New York, 1912.

how many laboring men have an appetite to be pampered? Do we need alcohol as "a tonic?" If so, the armamentarium of magic has a number of remedies better than drugs, a fact established by various non-therapeutic cults. And in diseases of the heart, that domain of fertile objection, your true leech if he must have a draught to act as a direct stimulant chooseth one of the lesser worts or banes as his trustworthy charm. Physiologists are agreed that alcohol depresses the heart muscle and the nervous system shows inhibited control under its influence. Since most of our present social problems concern the establishment of a better degree of coördination, alcohol as a social prescription seems an anachronism. Agreement is general that the abuse of alcohol is responsible for a large proportion of the crimes of violence, of industrial inefficiency, of poverty and misery, of suicide and of sexual offences. Generally those who oppose complete prohibition admit that mental defectives show a marked idiosyncrasy in the use of alcohol, a verbal boomerang in view of the general conclusion revealed in the army mental tests showing subnormality in from 60 to 75 per cent of the average population.

A rational statement of the situation by Sir Arthur Newsholme¹ holds alcohol as an enemy of the race, a creator of avoidable poverty, making the bed ready for tuberculosis. Potent as a frequent excitant of venereal disease its reputation is equally bad in swelling the ranks of fatherless children and of neglected infants and in helping to fill our prisons and hospitals. The extent to which traffic in alcohol was conducted in the United States when there was little restriction is shown by the amount of beer and spirits consumed in 1915. In that year the United States as a whole brewed nearly 60,000,000 gallons of beer and consumed 127,159,098 gallons of spirit. To control such a cataract—to re-condition social habits, long stuporous, to harmonize surly dispositions made more uncivil by dissipation—is the work of a century. Yet the normal development of society is from control of surroundings to the point where the individual is able to control himself in those surroundings. Cure must come from the organization of interests and a better appreciation of personal sacrifice. Punishment for drunkenness will not cure when the remedy is a normal social life, a status to be secured only through the removal of unwholesome influences some of which, like the saloon, ought to have their virtues continued if only their evils can be avoided.

CRIPPLEHOOD

Persons so restricted in the power and motion of their joints and limbs, either from imperfect development, accident or disease, as to affect their economic capacity may be considered under this topic. The underlying influences producing this incapacity are: Rickets, tuberculosis, infantile paralysis, accidents, scoliosis or lateral curvature of the spine, congenital deformities and accidents connected with birth, paralysis due to such incidents or to progressive disease of the nervous system, hysterical tendencies (affective phenomena) showing contractures, various deformities including amputations, burdensome occupation and inadequate diet.

Although we have no means of knowing the number of these cases in the general population probably a fair estimate is a quarter of a million. Treatment, if established at an early stage of the disorder, gives very satisfactory results. Consequently our interest from a constructive point of view centers about crippled children. And here the current attitude toward home care so far as possible for all children does not apply. Specialized institutions or hospitals are an imperative requirement in successful treatment and training. Expert and repeated surgical care, complex systems of organized physical education together with cultural training, special dietaries, ideal climatic conditions, all require attention generally impossible in the home. At the same time when convalescence is well established the individual should have an environment inducing the greatest amount of happiness compatible with health.

A rather common belief, not upheld by observations, that crippled children suffer no mental impairment sometimes reacts unfavorably upon the child's future. Many pathological and congenital cases are also *mentally* crippled, as a careful psychological examination generally establishes. One of the most important features in the development of special educational facilities for crippled children is occupational training and a wide variety of pursuits is taught in the special schools and hospitals. Needle trades solve the vocational problem best for crippled girls, while manual training for boys and girls, bearing in mind special aptitudes, appears advisable, from the point of view of future economic necessity.

CHRONIC HEART DISEASE

Generally scientific exactness required a more precise statement than the term "disease," applied in describing an organ. "Heart disease" is undesirable since it often is a synonym for ignorance of the causes of death or is used to cover an inexact diagnosis. The Bureau of the Census accepts "Valvular Heart Disease" as a satisfactory statement for mortality statistics, but for diagnostic purposes it has little clinical value since it often includes cases in which disorganization is merely a matter of function without real structural disease. The International List groups nearly all deaths from cardiac disturbance under the heading "Organic Heart Disease," for attempts to classify according to causation is apt to increase confusion. Although one of the chief causes of death, being assigned fifth place in the mortality list, cardiac disorders have not an equal degree of importance as a cause of social inefficiency from physical disability. Nevertheless their preventive aspects should be the subject of thorough analysis.

For purposes of economic classification it is desirable to distinguish two groups of conditions. A large share of the cases of *disordered structure* are the results of infection by a specific virus such as is found in rheumatism, syphilis, pneumonia, diphtheria and various other conditions caused by microorganisms. Here the prevention of a physical handicap requires vigilance in stopping the disease from spreading to the heart. Especially does this apply to rheumatism, whose early diagnosis is achieved by recognizing its relation to "growing pains" (first manifestations of disease), sore throat, lassitude and feverish attacks. Caution generally is needed lest early treatment and rest be considered too casually. A pitfall even more significant lies in the tendency to treat too seriously the *functional disturbances* of young hearts, a condition implying disorganization of the higher nervous centers. "As a rule, when heart disease is diagnosed in a young person the treatment adopted is such as to alter entirely the whole course of his future habits and development."⁴ If a cardiac murmur is discovered without appreciating the value of the signs and symptoms observed in a functional disturbance the result may be an unnecessary hampering of physical activity, leading to stunted development from treatment totally unsuited to the case.

⁴ Southerland, G. A., *The Heart in Early Life*, London, 1914, p. 14.

THE DEAF

Suffering personal disadvantage rather than burdensomeness to the community the individual who is unable to hear and, often, to speak intelligibly is, after all, a member of a social group, handicapped and needing attention. The "deaf and dumb" person's status generally is ill defined or barely recognized as a problem. Yet we are coming to focus attention upon his cultural and vocational needs which demand specific facilities to meet a definite disability.

Statistics based upon census returns recognize various groupings, i.e., individuals who are unable to hear or to speak, others, either able or unable to speak, who had become deaf before they were eight years old, including those totally deaf, those partially deaf using artificial, auditory devices and a number of related groups. Probably a conservative estimate would place the number of such persons throughout the United States at 50,000. About one-fourth of these are cases of congenital defect and nearly one-half the number were affected before ten years of age. There seems to be no sexual superiority, numerically.

Middle ear disease from the infections of childhood accounts for a preponderance of the acquired cases. Scarlet fever is one of the worst offenders. Various protracted fevers such as malaria and typhoid are followed by even deeper seated infections, though somewhat less frequent than the preceding diseases, while accidents cause but a small percentage of deafness.

Fully one-half of those ten years of age or more have learned to read the lips and nearly one-third use speech as a means of communication. About one-half of those enumerated in the last census were *able* to attain economic independence and of this number one-third were not employed while the balance were about normally distributed in agricultural, mining and manufacturing enterprises. As a rule the deaf are not a community burden and nearly all occupations are open to them.

While deafness amounting to a social handicap probably is not on the increase it has a distinct hereditary tendency to recur in certain families and has a definite place in any welfare program, especially as community supervision seeks to equalize social and recreational privileges.

Unlike the blind there is no special legal recognition given the deaf nor does there appear to be need for such. Moreover there

is a fair degree of responsibility shown by the state to this group, and, according to census statistics, only a comparatively small number of these unfortunates have not attended special schools for the deaf. Still, the most important need is adequate provision for their education. At present most of their training is carried on in specialized institutions, although the public school is tending rapidly to assume its share of responsibility, especially in the important feature of industrial training. Utilization of means for teaching lip-reading to adults also should be emphasized.

While nearly all economic fields are open to the deaf they still are too completely dependent upon their own efforts for social and recreational advantages, the deaf person being obliged to build up his main companionship with his handicapped fellows who are willing to show him more sympathy than does the average friend. However, this probably should be encouraged as a fundamental biological principle of like congregating with like and forming purposive associations.

THE BLIND

Perhaps the greatest physical handicap to overtake the individual, vigorous in health and in all other respects economically efficient, is the loss of the foremost organic mechanism responsible for social organization. Preëminent in bringing about the first intersection of mind and matter, sight is the first of our senses to be counted indispensable.

In the United States probably the number of those totally blind, including war veterans, is about 75,000. Of this number only about 1 per cent are under five years of age while 50 per cent are sixty or over. This condition is accounted for partly by the regular increase in a generation steadily growing old, since the mortality rate of blindness is low, and also by the increasing occurrence of cataract and glaucoma, diseases accompanying senility.

About four-fifths of all blindness is due to specific affections of the eye chief of which are cataract, atrophy of the optic nerve, glaucoma, ophthalmia of the newborn, trachoma and corneal ulcer. Only slightly over one-eighth of those who have lost their sight suffered the defect from accident. General diseases responsible for blindness are: measles, meningitis, scarlet fever, small-pox, typhoid fever and influenza, but the occurrence of such cases is comparatively infrequent. As an industrial hazard mining holds first place, while

occupational risks are found chiefly in the metal working trades. Of the infectious diseases gonorrhoea, the cause of infant blindness or ophthalmia, and responsible for one-fourth of the blindness existing among children, is readily controlled if ordinary prophylactic precautions are taken at birth. Legislative enactments and more general public recognition of the relation of venereal disease to blindness are helping to reduce the number thus handicapped. Trachoma, also a contagious disease, lends itself to simple and efficacious treatment. Most of the other specific eye diseases depend for treatment upon surgical measures or upon the improvement of health.

Although certain types of blindness show hereditary tendencies, from the standpoint of eugenics there is little to fear from the intermarriage of blind persons, in fact marriages among them are infrequent. Moreover the hereditary carrier is not always blind.

With respect to its prevalence in different generations the inference seems justified that blindness is slowly decreasing in rate. Various organized movements for its prevention are being undertaken and provisions for education are now made more generously. Publications in raised print, libraries of books for the blind and means for home teaching all show an increased disposition on the part of the states and the Federal government to help this handicapped group. Their social life as well as their industrial opportunities are met by homes for the adult blind, schools for the children and special work shops for training and manufacturing. It is not now difficult to place persons "who cannot see" where they may make a fair economic adjustment. For those unable to go out home work has generally been secured and this specially applies to the vocational needs of women.

One of the most recent plans for helping the blind is through the provision of a system of pensions. This scheme has been tried by a number of states with not altogether satisfactory results. A more generally acceptable plan deals with a system of indemnification for loss of sight, clearly a charge of social insurance which recognizes various handicapped groups as worthy recipients of assistance.

DRUG ADDICTION

Although the use of narcotic drugs in the United States is diminishing slowly the relation of this fact to habituation probably

is explained more rationally on the basis of the present difficulty in procuring drugs than from changes in personality. Most addicts are of the unstable type with inherent craving for stimulation, narcotics representing merely a choice. Probably there are more than a hundred thousand persons in this country who have developed the injurious, fixed and increasing desire for the alkaloids of opium and coca leaves, the number of these handicapped cases almost equalling the combined groups of the blind and deaf. With the enactment of Federal legislation in 1914 the distribution of morphine and cocaine came under rigid control. Consequently smuggling, peddling and illegal procurement of drugs by the helpless victims has grown into a problem of tremendous proportions.

In many individuals we recognize the narcotic impulse as an inherent tendency to be dealt with by medical, social and administrative methods. Defective and vicious addicts, toward whom we have a good excuse for commitment and restraint, are not the ones giving us the greatest concern. The poorly balanced youth whose suggestibility and prurient curiosity induce the first, fatal trial and who directly acquires an uncontrollable habit, with a system so sensitized to the action of opiates that even after a "cure" ordinary cough mixtures may start the practice anew—is the problem. Education is the most potent means of preventing and arresting the disorder if only clinical stations, public health administration and supervised dispensing can be maintained. For under this plan we have an assured although drastic method of cure in most cases and a means of driving the peddling harpies out of business and of establishing a rational and legitimate distribution of morphine to sufferers from chronic disease requiring alleviation of pain.

So far as complete reduction of the practice is concerned, no one knowing the strength of the habit and the weakness of control in human beings of the unstable type can hope for the attainment of so ideal a state. The utmost to be anticipated is the exercise over the victims of sympathetic control or probation, utilizing state hospitals when segregation is necessary.

OCCUPATIONAL HAZARDS

With the development of complex, industrial processes utilizing deleterious chemicals, exposing the worker to physical conditions injurious to health and often presenting raw material filled with

infectious organisms, occupation presents a factor of considerable social and medical importance. For many vague complaints are found to be correlated with the individual's vocation, an analysis of which enables the industrial clinic to clear up a variety of conditions formerly acting as handicapping stimuli.

It should be born in mind that hazards of employment have a definite relation to the individual's personality, i.e., to personal idiosyncracies in the instinctive organization. The general grouping in which we find data of industrial disabilities is this: In relation to unusual degrees of temperature; from exposure of infra-surface workers to compressed air; excessive humidity or aridity; exposure to dust, especially that of an inorganic nature causing pulmonary lesions; unusual degrees and kinds of light; conditions inducing infection or carrying specific germs; work in chemical poisons; processes of manufacture or surroundings causing skin irritations; conditions exposing the worker to occupational cramp, repeated shock or motion, other conditions inducing excessive fatigue or psychic disturbance, such as disgust at odors, sights, etc.

PARASITIC AND BACTERIAL INFESTATIONS AND INVASIONS

Here we may consider a number of disorders each of which claims a small group only, whose members however are handicapped to the extent of semidependency. Among parasitic conditions malaria, perhaps, counts the largest number of cases. Under modern public health administration this social handicap is practically removed and its victims treated and cured.

Leprosy, a bacterial invasion, counts but a few hundred afflicted persons, yet it occurs in all parts of the country. In Louisiana a leper colony has existed since 1894. Massachusetts usually has a dozen inmates at least in its leprosarium. The disease occurs in all races and is likely to appear at about the age of thirty. While its danger has been set forth in sensational terms causing undue alarm, leprosy is, unless carefully guarded and segregated, a menace to the community. Recently its treatment under specific therapy has met with considerable success.

Hook worm, a parasitic infestation; various types of worms—flat, round and thread, invaders of the gastro-intestinal canal and also, in certain varieties, the respiratory tract; trichinae, hair-like parasites invading the muscles, all include as victims an appreciable

group of individuals whose handicap is a definite problem for General Medicine, although frequently its discovery is due to the social case-worker.

DISORDERED METABOLISM AND CHRONIC TOXEMIAS

Constituting the chief factor in many dependent and semi-dependent families is a group of chronic disorders responsible for the individual's more or less complete physical incapacity. Although mainly problems of General Medicine, the fact that such persons often are able to become partially self-sustaining under social direction makes them wards of Social Medicine.

Some of the conditions responsible for this situation are: diabetes; chronic nephritis or Bright's disease; pathological states of the liver; gastro-intestinal conditions, often the result of inadequately organized habits relating to nutrition; chronic rheumatism and various other disorders undoubtedly resulting from infections. This group is mentioned here merely for the sake of completeness.

UNSTABLE PERSONALITY

Frequently the patience of the family or the community is strained to the breaking point by the irresponsible acts of an individual whose unstable character, want of social control, and economic inertia belie his intelligence. As a last resort he is referred to the psychiatrist whose analysis labels him a "psychopathic personality," "constitutionally inferior individual," "constitutional psychopath," etc. In earlier days when "morals" were the basis of diagnosis these cases were called Moral Imbeciles, thus emphasizing the *character* defect of a personality showing intelligence.

The constructive training of these subjects in the community usually fails from want of authority to compel the adoption of fundamental social principles such as regular personal habits, regard for the rights of others, self support, etc. If commitment to a state hospital is suggested against the individual's wishes, the court hesitates to order custodial care, since the evidence of coherent thought, favorable personal appearance and abundant promises of reformation generally excite judicial sentimentality into giving "another chance." The stimulus of physical pain and discomfort resulting from such treatment as a short-term, intramural commitment, or the discipline following an enlistment in the army or navy

often acts as the most satisfactory tonic available for developing lethargic ambitions.

Many such cases appear to be closely correlated with endocrine development during adolescence and, in the majority, hereditary tendencies are evident. Inadequate organization of instinctive tendencies, often with a poor basis upon which to build, is the outstanding clinical feature in their social irresponsibility.

MENTAL DISORGANIZATION

In order to meet the social demands customary to the community the individual must possess at least a minimal degree of understanding and control. Personal irresponsibility—due to inadequate development or “feble-mindedness” or to mental disorganization generally termed “insanity”—interfering with the rights of others, presents the question of deprivation of liberty and separation, temporarily or permanently, from other members of the community in order that proper treatment and care may be exercised.

The theory that feble-mindedness always needs rigid custodial care and that insanity invariably is accompanied by violent states of behavior is responsible for much loose organization in dealing with these cases. Experience has shown that the majority of our defectives may become self-supporting if given some supervision and a little social insurance to tide over periods of need. Thus the state may be relieved of a large part of the burden of custodial care and may concentrate its energies upon efforts at early training. Likewise the impression that insanity generally shows itself in episodes of excitement often makes us forget that an even greater degree of social irresponsibility may result from uncontrolled reproductive tendencies. Yet we are ready to commit as legally “insane” those who cannot think straight, but crooked acts like arson and destruction of property as a result of uncontrolled rage, perverted appetites and want of enough sexual control to live respectably, are prison offences.

Disorganized feelings like disorganized ideas may be a legitimate object for the state hospital on the ground of *social irresponsibility*, a term more nearly satisfactory than “insanity” and one to be utilized more widely in commitments. Too often the term insanity is not apposite, since it connotes irresponsibility toward intellectual organization whereas the subject may know what he is doing and yet

be an even greater community menace on account of his uncontrolled appetites. This was the case with a sodomist—an intelligent person—who served ten years in prison for his first offence and on release committed the act over again, aware of the punishment to follow. Also in the case of a moderately bright mother of illegitimate children, poverty stricken and distressed that none of her lovers would keep their promise of marriage, there was complete incapacity for control although the woman foresaw the consequences. Such cases as these, showing a want of stability sufficient to establish their freedom in the community should be committed to the care of institutions equipped to train and “cure” or if necessary to furnish a permanent home.

CHAPTER VIII

SOCIAL CRITERIA

THE "NORMAL"

The term culture, employed to describe racial accomplishment in social organization, expresses a relative estimate of group attainment based on a comparative standard, generally descriptive, and gives rise to that inexact notion the *normal*. In addition to its tendency to characterize a person as acceptable to his community the term normal suggests that he is not exceptional in respect of certain traits which together form a standard of usual attainment more or less elastic in its range of deviation. In Social Medicine we may utilize the concept normal so long as its standard is scientifically maintained.

Obviously, however, it is perplexing to formulate a universal standard when racial and geographical variations present such a wide divergence of social characteristics. While the prevailing test always will be the power successfully to adjust oneself to modes of action current in one's group, a situation discouraging the development of a universal technic, yet in all populations there are some common ways of responding to fundamental needs, desires and interests; to related beliefs, notions and codes as well, whose tendencies have certain elements of universal application. Three such factors are represented in: the general ability to understand directions; control of appetites and feelings and coöperation in group activities; physical vigor and wellbeing sufficient to ensure self-protection under the group. These elements may form the basis of a standard having a broad range of distribution, including the mediocre or commonplace individual as well as the truly gifted.

Frequency in distribution of social phenomena, graphically expressed by a bell-shaped diagram known as the normal curve, is used in systematic observations to indicate variations from a *mean* or average item. The *mean*, therefore, corresponds essentially to the social concept *normal*. From it the range of deviation varies with the diffusion of community culture, yet, generally, large variations

occur less often than small ones, while occasionally systems of observations conform so poorly to the usual curve as to require an entirely different pattern.

Thus from a *systematic* standpoint there is no break, theoretically, in the continuity of a series of social phenomena, the incidence of whose occurrence tends to follow the law of normal distribution according to which there may be exceptions but not abnormalities. From a *social* viewpoint, on the other hand, the ignoramus and the erudite scholar are not extreme examples of the normal type although they may follow a normal distribution; they are strictly abnormal in the sense that each is separated by a wide gap from the mean or normal.

FUNDAMENTAL FACTORS

The individual's community value as well as his own economic efficiency are closely related to his ability to act normally. Whatever means are available, therefore, with which to verify estimates of personal responsibility are of direct assistance to society. Three systems conform in the main to a universal measure of social efficiency. These are represented by the terms *intelligence*, *character* and *health*; surroundings also might be included as a fundamental criterion.

Popular terms utilized as social criteria share with descriptive methods in general the disadvantage of inexactness. In the present instance, however, simplicity and adaptability appear somewhat to counterbalance superficiality. Qualifying terms also are enhanced in value, as here, if they lend themselves readily to analysis showing the presence of fundamental factors. Therefore, although each of these criteria still is the subject of academic discussion as to its precise nature, its popular meaning is so well defined as to encourage its elevation to a scientific level where it may be subjected to systematic scrutiny.

THE CRITERION OF INTELLIGENCE

Ability to grasp quickly what goes on about one, the special sensory faculties responding adequately; to be able to interpret these reactions; to associate remembered events; to analyze, judge and utilize creatively situations thus presented, is the specific developmental achievement of the human organism. Wanting this mental

capacity man becomes isolated, unproductive and transitory. Developed to its fullest extent intelligence points the way to omnipotence. While this development of mentality in no wise enfeebles man's nature, it tends to modify and harmonize primal interests so that they may respond to a larger variety of attitudes and activities. It becomes the foundation of culture or civilization, smoothing rude paths, moulding uncouth practices, yet retaining and directing rationally toward further development such primitive, individual tendencies as are of advantage to the community.

The importance to Social Medicine of intelligence ratings is self evident since they furnish a logical basis for estimating, in the social synthesis, the individual's coöperative ability. From the age of the pre-school child to that of the adult industrial worker psychological data respecting mentality are a constant aid in estimating social efficiency. Either individual or group assistance such as social insurance, wage adjustments, profit sharing and other competitive questions thus may be discussed upon a rational basis with as much justice as possible and a maximum of benevolence.

During the past decade various technical measures in the nature of scales or mental tests have developed a more general use. Through their application the individual's capacity to respond may be recognized without delay whereas prolonged observation formerly was required to establish the subject's intellectual status. Utilization of such means by educational agencies and vocational companies offers a good example of improvement in social analysis. Today the student or the apprentice may begin his training under a more nearly suitable individual program without wasting time in experimenting with a general scheme in order to learn by repeated trials and failures his capabilities and his inaptitudes.

Whether of a qualitative or a quantitative, of a descriptive or a mathematical nature, general mental tests are designed to find out how far the individual can grasp fundamental situations. In using descriptive methods greater responsibility rests upon the observer since personal opinion, in a large measure, influences the result. Quantitative tests on the other hand, such as those systematized by psychology, give a final mathematical expression to the estimate correlated with chronological—or better—with physiological age, tending thereby to eliminate personal opinions of the observer and to place the results upon a statistical basis.

The Coefficient of Intelligence* or the Quotient of Intelligence¹—I.C. or I.Q.—is the best means now available for expressing more exactly the result of a general psychological test. The former represents the ratio existing between the number of points scored by the subject responding to the "Point Scale" and the number of points to be expected of an individual at his chronological age. Thus the fraction $\frac{51}{75}$ indicates an attainment of 51 points when 75 should have

been obtained on the basis of usual accomplishment at this age. The result, expressed as a decimal, gives an Intelligent Coefficient of .68. The I.Q. is the ratio of "mental age" to chronological age.

A practical result of this quantitative treatment of intelligence is the important social classification suggested. Heretofore such meaningless epithets as simpleton, feeble-minded, moron, have been applied, often without discrimination, to describe the large, heterogeneous group of individuals whose mental equipment is superior to that of the imbecile yet below normal. Under more nearly accurate methods less emphasis now is given to oral and more to the manual factors of intelligence in the examination of persons whose analysis shows them to be at an educational disadvantage in the schools. That is, we distinguish between ability to deal with ideas and thoughts and ability to grasp only tangible things and visible results. We recognize anticipated functioning of special aptitudes such as those involving mechanical skill, agricultural interests or salesmanship. The individual's economic position in the social group thus is calculated from his I.C. or I.Q., while his adjustive capacity in practical situations is recognized in its true relation. The social order to which he belongs may be made an important criterion upon which to base the type of community assistance needed.

SOCIAL TYPES BASED ON INTELLIGENCE

Considered from the point of view of one's ability to understand, as estimated by measurements of its fundamental, psychological elements, society may be analyzed according to the following scheme, based upon the relation between the intelligence test and the social test, the ability to attain social independence as it relates to mental capacity only.

* Yerkes and Wood, *Methods of Expressing Results*, Bul. Mass. Com. Ment. Dis., Vol. I, 1917, p. 107.

¹ Terman, L. M., *The Measurement of Intelligence*, Boston, 1916.

NUMERICAL ESTIMATE OF MENTAL CAPACITY	SOCIAL ORDER
0.40 or less	Dependant
0.41 to 0.70	Semi-dependant
0.71 to 0.90	Backward or dull
0.91 to 1.10	Ordinary or commonplace
1.11 or more	Imaginative or creative

I.e., individuals with an I.C. of 0.40 or less are of the dependent social order; those 0.71 to 0.90 of the dull group, etc.

Obviously any scheme must be a more or less tentative estimate since inferior capacity often rises to higher levels of social efficiency and developmental power when encouraged by superior surroundings. Experimental results of reëxamination also clearly suggest the need of considering intelligence biologically in its relation to the individual's entire organic system rather than in its relation to the nervous system only. This is often illustrated in the short sighted policy of educational schemes paying too little heed to the factors of nutrition and of physiological development in their relation to adolescence.

Mental tests likewise make an important diagnostic contribution in pointing out the chronological rate of intellectual development and in establishing scientifically the mere belief that inferior mentality most often represents the action of a developmental defect or of an hereditary tendency toward a premature slowing down of structural growth. Later we shall examine some of the reasons for not considering intelligence alone a sufficient measure of social value, or even a primary measure.

Another advantage of quantitative estimates appears in the tendency to eliminate over-refinement in diagnosis, the range of decimal expression being broad enough to dispose of expectations more precise than present technical methods warrant.

"FEEBLEMINDEDNESS" AN INEXACT TERM

As a topic of popular discussion intelligence, of our three criteria, is least cleverly handled by the community. Yet it is doubtful if any term is used so often as the basis for reform. Whether the question disputes the prevalence of alcoholism, delinquency, poverty or the need of birth-control, the general response is to attribute the

social defect to "feeble-mindedness." "All forms of social pest with which modern society is burdened," says a popular propagandist, "are the results of this condition." So indefinite is the conception of "intelligence" and so loose the basis of classification that the proportion of feeble-minded in similar, widely situated groups is reported variously by observers as from 1 to 90 per cent.

That this pseudoscientific term is used too freely as a descriptive estimate of general incompetency is shown by the results of organized training and supervision when applied, systematically to mentally inferior individuals.² Furthermore its thoughtless application to a variety of unanalyzed social problems, many of which merit such an estimate as a matter of convenience only, is responsible for much careless case-work. A reactive tendency already has begun to question the expediency of using an expression so inexact. As an easy means of evading an exhibition of diagnostic inexperience Juvenile Courts have been too ready to dispense with careful analyses by branding the culprit "feeble-minded" and ordering his segregation without first attempting a supervised, community adjustment. So many inaccuracies have crept in from ready-made schemes for mental diagnosis that its fallacies have equalled Lombroso's superficial criteria of criminality. Moreover, to confirm one's suspicion of mental inferiority by reliance upon the usual expectations from inefficient, public school grading, making no distinction between imbecility and retardation, risking all under the one group—the feeble-minded—obviously is a superficial and hazardous step.

That there is much confusion over the definition of mental defectiveness legally adopted in England is generally admitted. According to the British Mental Deficiency Act of 1913, *idiocy* refers to individuals unable to guard themselves against common physical dangers; *imbecility* refers to those showing incapacity to manage themselves or their affairs or of being taught to do so; while *feeble-mindedness* comprehends all other mentally defective persons who require care, supervision, and control and appear unable to benefit from public school instruction.

American judicature does not define feeble-mindedness and whenever situations involving evidence of mental incapacity are brought

² Bernstein, Chas., Reports, Rome State School.

to its attention the Court's conception of constructive effort depends entirely upon the breadth of social vision of the presiding judge. Although sentimentality sometimes prompts the Court to disregard specialized advice, in most cases scientific suggestions are welcomed as the basis of judgment.

There is no valid objection to the term feeble-minded as a superficial designation for mental defect so long as it is used to characterize a symptom merely or to describe subjects suited to segregation. However, a young adult with the mental equipment of a child, provided his health and character are satisfactory, generally justifies, by his self-support and relative economic efficiency, a better social position than is connoted by the term "feeble-minded." If healthy individuals of well organized character are allowed to leave school at fourteen, or even at twelve provided they are physically precocious and are directed into a suitable industry; or better if they are able to combine educational requirements and vocational interests under direction until eighteen years of age, they do not become social liabilities, although their mental equipment has a structural development of only one-half the maximum capacity.³ Whenever new situations arise such persons show their semi-dependency by needing help toward readjustment, upon receiving which they again follow an uneventful, automatic career—mediocre yet economically adequate. Obviously it is unjust to count such persons feeble-minded, although they need a little more patience shown them than leaders sometimes are willing to give. Furthermore observations already show an improvement in subsequent generations of poorly endowed families developing under conditions less subjected to the ravages of poverty.

Undoubtedly individuals showing an Intelligence Coefficient under .40 are weak in all mental processes and properly may be described as feeble-minded, not always so much in quality as in quantity of mental apparatus. Their simpler, elemental processes may be well developed as shown often by marked mechanical aptitudes, but their analytical processes are limited. Yet it is not unusual for persons with a mentality as low as is represented by the decimal .30 to rear satisfactory families.

³ Dunham, F. L., *Juvenile Labor*, Report State Bd. of Labor, Baltimore, 1919.

FACTORS IN MENTAL DEVELOPMENT

Social analysis recognizes developmental stages of intelligence to be just as significant for consideration as degrees of mental capacity. Birth starts the mechanism at a maximal rate which gradually diminishes toward its period of complete structural development at eighteen years. Although at eight years the child has attained more than three-fourths of his mental apparatus his "intelligence" does not come to a standstill. On the contrary the usual child continues to develop more and more intellectual qualities. This progress, however, is in the nature of functional growth or quality rather than in quantity of nervous structure.

The intellectual qualities strikingly differentiating the eight year old child and the young person of eighteen, both of usual attainment, relate to analyses of situations. Compare, for example, the technical stimuli chosen to present to individuals under eight years of age and the tests suited to older persons. Ability to respond to sights and sounds, to recall and to describe them, to coördinate simple activities, yet without much originality or even foresight, characterizes this stage of childhood, while beginning with and developing through the succeeding stages an associative capacity with ability to analyze situations is looked for. Soon after this eight-year-old stagesexual maturity begins to dawn and with it comes the functional development and organization of imaginative, associative and analytical processes.

Unlike the growth of structure, functional development starts slowly and accelerates progressively. While structural development gives an increased capacity for *receiving* impressions, organization appears to have its foundation in processes that weld together or *integrate* sensory impressions and interpretations, helping to establish control by modifying primitive responses according to associative and analytical suggestions received from new and more complex external conditions. Grown automatic, the responses or reflexes of the primitive or unconditioned nervous mechanism are compelled to change or become conditioned to meet social relations.

Thus the prepubescent stage of development marks an important transitional period in the life of every child, for his appetites, affective tendencies and interests are about to become reorganized on broader social lines than have prevailed hitherto in his home experi-

ence. If the *usual* child meets the situation with difficulty how much more severe is the test for the *unusual* child, inadequately endowed and structurally disorganized. Obviously he cannot utilize to the same advantage the program customarily employed in training the majority. The sensory apparatus of normal capacity, subjected to the usual variety of stimuli from a wide range of surroundings, has been able to acquire automatically a broad experience and a fund of interpretations or information. Defective receiving mechanisms, dull to impress, rarely alert, inert to finer shades of tone and color, fail to acquire the usual keenness expected of the child when he enters public school life. Inasmuch as the superficial demands of the group fail to take account of sensory refinements the backward child follows the customary routine at school entrance. Should his handicap be undiscovered he continues for a time with the usual members of the group, eventually falling below their standard because of his disability in fundamental, constitutional features needing opportunity for development. Although fitted by chronological age his mental equipment does not correspond to the requirements of the first regular school grade. Many of the so-called feeble-minded children belong to this class. Given individual attention in developing adequate reactions to fundamental sensory stimuli and their interpretation (which the usual child acquires by himself) before attempting graded work, the majority of these subjects would reach a much higher degree of educational and economic efficiency than they can now attain under an educational system in which they grow more troublesome and misunderstood.

DELINQUENCY AND MENTAL DEFECT

One reason for discouragement over the problem of "the feeble-minded" is the general misconception that they all are delinquents and that their children are bound to follow in their footsteps. The small group of misdemeanants and criminals brought to our attention as mental defectives with the suggestion that this guilty condition is monopolized by the feeble-minded represents a popular fallacy. Courts of law, prisons and other segregative institutions hold but a small fraction of the entire population whose intellectual status is that of semi-dependency and dullness. The greater number of these persons are efficient laborers and satisfactory parents who rarely

need assistance or command attention except from politicians and social reformers. The same blunder is made in considering offenders against the traditions of chastity. The great biological problem of reproduction is lost to sight in petty generalizations over a little group of women too inferior to evade capture. Meantime the real problem from a public health and ethical standpoint is submerged through the ability of intelligent offenders to evade suspicion.

CONSTRUCTIVE TREATMENT

Instead of segregating the semi-dependent members of society at state expense, a better policy now advocates their early individual training and continued guidance in the community. This plan shows favorable results when limitations imposed by inferior intellectual capacity are recognized socially and correlated with the individual's conduct capabilities.

Unfortunately community assistance partakes too much of benevolence, sentimentally dispensed, or of coercion inducing pauperism, and it lacks efficiency in dealing with a social group that always may be semi-dependent and child-like. Recreation centers, the family wage system, social insurance and health protection, are undoubtedly more rational means of treating "feble-mindedness" in its higher grades than segregation and sterilization.

CHARACTER AS A CRITERION

Recognition that mental incapacity alone fails to explain social inefficiency seems to be more or less general, although the reasons why the mind is unable to supply the entire power of control over conduct seldom are made clear. The usual analysis of human action does not attempt to consider its foundations beyond such vague attributes as purpose, intention and similar descriptive terms bequeathed by "moral philosophers." Yet a variety of social problems verify clinical evidence showing that highly intelligent persons often turn out to be the biggest humbugs, while those of inferior mentality may become the most stable members of society.

Under the dominion of the social instinct, group activities require the restraint of animal impulses. The conditioning or control resulting is the beginning of conduct. Beneath the surface of culture, therefore, are the organism's biological needs, expressing physical

and chemical energies and resulting in such activities or forces as appetites and feelings. Thus the problem of social efficiency is more often biological than psychological, an investigation of character rather than of intelligence.

Aside from the perennial subject of illness, no topic is discussed so generally as character which, ordinarily, is supposed to consist of innumerable qualities, idly held as either "good" or "bad." Hitherto the chief efforts at its analysis have been made by the great novelists and poets. Few attempts have been made to reduce character and conduct to a scientific basis, although obviously such a treatment of human nature would have as its rational foundation a diagnostic study of the rise or deterioration of the appetites together with an investigation of the constitution and interaction of such elemental feelings as anger and fear, and such complex systems as love and hate. A moment's reflection convinces one that his relations with others are harmonious in so far as he controls his feelings and moderates his appetites.

PRIMITIVE BASIS

Fundamental conceptions of character are based upon experimental evidence that primitive organisms were protected and the species perpetuated by the secretions of structures from which and in connection with which man's various gland-like systems and reflex nervous mechanisms have evolved. The thyroid, the suprarenals and chromaffin cells exemplify such organs whose obedience and close relationship to the involuntary nervous system remind us of the important part they have always played in controlling growth and development. An equally important function of these regulators of metabolism is found in their ability to call forth affective states of great intensity and utility in time of bodily need. Thus in their relation to fear, anger, disgust, joy and other modes of instinctive nervous excitation these archaic devices of the human body supply chemical energy whose forces or modes of action are designated by the term character.

QUANTITATIVE STUDY

If character is to become a scientific criterion of conduct it must at least reflect possibilities tending toward exactness. Yet urgent as is the need it must be admitted that accurate technic is wanting

for estimating affective states. Nevertheless experimental progress shows that quantitative estimates of character eventually may be available for practical use. This hypothesis is based upon biochemical analyses of glandular secretions and their effects in producing affective phenomena. Similarly researches into the structure and function of nervous impulses reveal the movements of ions or electrically charged chemical atoms through membranous nerve cell connections, a physico-chemical process reducible to measurement. Affective reactions generally are held to be accompanied by electrical changes in the human body. Such excitation results in the psycho-galvanic reflex, a valuable objective sign in the elucidation of behavior. An example of progress in estimating the quantitative basis of character is found in experimental work on the "measurement of emotion."⁴

HISTORICAL DATA

As a practical appliance, however, estimates of character need not be delayed from want of laboratory tests. Accurate historical records of the rate and mode of development of the individual's instinctive and affective tendencies and their excitatory characteristics have great value in estimating the trend of biological tendencies in the motivation of conduct. Such observations should be obtainable from the subject's associates as well as from his own anamnesis. Vagabondage, lying, stealing, vindictiveness and similar social offenses often are found to spring from episodes of anger, fear, curiosity and other primary tendencies of analytical value when recognized as protective mechanisms of the organism. If, instead of superficially interpreting mischievousness as "badness," one first examines the basis of personality a more nearly rational interpretation of social conflicts emerges and either punishment or training may be administered with greater certainty of its constructive effect.

An instance in which the fundamental motive of curiosity was the decisive factor in the adjustment of two boys of eight years who were brought to the Juvenile Court for the larceny of watches is an instructive example in the analysis of delinquent character. Investigation of the career of one boy showed a well worn trail from the pawnshop to the "movies." Interest here was entirely of an acquisitive

⁴ Smith, W. W., *The Measurement of Emotion*, London, 1922.

nature. The other urchin was found to possess an extensive "museum" of systematically classified burned-matches, bits of colored paper, watch wheels and a variety of "treasures." The type of adjustment advised in the two cases is too obvious to need further elucidation.

So long as interpretations of character recognize its structural and functional basis it is clear that they must examine likewise hereditary and developmental variations. For example, precocious growth and early reproductive maturity are common to certain families. Such a history would temper one's judgment of a child's sexual irregularities. At the time of puberty the thyroid gland often functions above or below metabolic requirements. Erratic behavior of a marked emotional character in girls may often be explained and corrected on this developmental basis. Convulsive disorders, of either structural or functional causation, produce disturbances in character, indicating generally an inadequate organic basis. Excessive irritability or neurotic tendencies such as enuresis or bed-wetting, night terrors, noctambulism or sleep walking, autoerotism or masturbation and various other indications of nervous disorganization are to be taken also as evidence of an inadequate foundation. Surroundings are of special importance. Here the organic basis may be adequate, i.e., the nervous or reactive mechanism and the general physical system may show efficiency, yet the individual may fail to control, organize or correct his elemental tendencies according to social requirements. Generally such a situation is the result of defective training, recognition of whose value is an important historical detail. Whether or not the environment is best adapted to develop the specific type of personality presented and how far it is capable of stimulating the right kind of interests are vital questions in the analysis. The relation of character to health is of equal importance.

FUNDAMENTAL TYPES

Systematic observations of the development of behavior and conduct in childhood and youth emphasize the need of recognizing hereditary and developmental trends in the rise and progress of the appetites and feelings upon which estimates of character are based. In this manner inherent factors are brought into relation with surround-

ings, correlating basis and organization as the prime factors of our social synthesis.

Four fundamental groupings are recognized:⁵ *First*, we identify a group in which character appears to have a satisfactory basis and to be well organized. Such individuals satisfy most readily the ideal of conduct making happiness its end, "happiness consisting in living the best life that your powers command in the best way that your

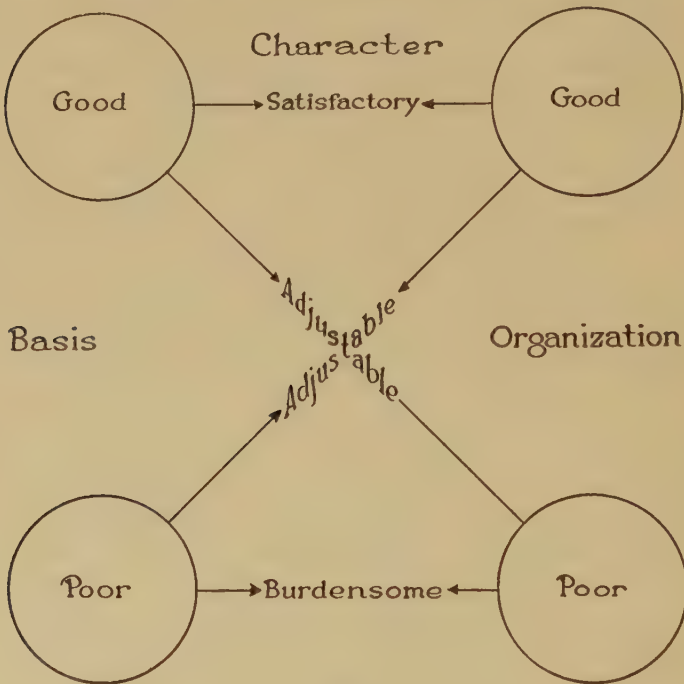


FIG. 9

circumstances permit." Considered from the standpoint of character these persons give the community no concern. *Second*, as an antithesis to the above is the group whose character has a poor basis and effects a poor organization. Most individuals of this type need special training, generally supplemented by segregative treatment. *Third*, an adjustable group, to which belong many of our social prob-

⁵ Dunham, F. L. Social Interpretation of Mental Estimates, Hosp. Soc. Service, Vol. VIII, 1923, p. 71.

lems, shows character with a poor basis yet in response to satisfactory surroundings rising to an acceptable degree of organization. *Fourth*, the individuals of a second adjustable group have a good basis of character but a poor organization, generally due to environmental reasons. Obviously the second and third groups present a greater number of problem cases than the fourth group, within whose confines is included the relatively small number of social dependants whose defective or disorganized character proves a community menace.

A number of levels under each division show various degrees of attainment in which the individual approaches or recedes from his basic group tendencies.

Figure 9 illustrates the four typical relations between basis and organization as here discussed.

Members of the first group are recognized clinically by their freedom from nervous instability, from spasms or convulsive tendencies, and from neurotic phenomena like sleep-walking and temper tantrums. Their hereditary eminence shows itself in an involuntary nervous system automatically developing control in accordance with the social conditions of its surroundings. Added to innate stability and adequate developmental opportunity suitable external surroundings give character its best features.

Opposing the satisfactory group are the burdensome, whose inadequate basis and inability to organize their appetites and feelings are shown from birth in symptoms of nervous instability whenever adjustments are required. Excessive irritability toward the environment at various important stages in development such as teething, and affective excitation whenever the self is thwarted characterize these individuals. If the unbalanced condition occurs in a setting of ignorance, poverty and neglect, dependency, even to the extent of segregation, often results. Such a case showed: hereditary manifestations of "insanity"; development in alcoholic and dissolute surroundings; "spasms" in childhood and again in adolescence; "hysteria" during early adulthood and marital incompatibility. Always finical over food and with sexual frigidity, the individual bore a neighborhood reputation for temper and irresponsibility. There was no venereal disease or chronic pathological disorder to complicate the situation.

Furnishing a good argument for the exercise of patience towards the unstable, whose poor character in time may develop ability to ad-

just itself, is the third group starting out with constitutional nervous instability. Getting on poorly at school yet doing well under vocational probation, young people showing inadequate basis with eventual organization are frequent among the commonplace population. Representing this situation is the case of a boy having "epileptic attacks," afterward taking the form of fugues (episodes of irresponsible wandering), with various phobias and aversions while in school. These unstable phenomena subsided with the establishment of vocational interests and activities.

Constitutionally sound and auguring well for satisfactory conduct the basis of character still may produce a result unworthy of hereditary and developmental promise. Analysis usually finds the environment wanting potentiality in such cases. Delinquency, showing a hopeful outlook for reconstruction, numbers many subjects under this fourth group for which a satisfactory organizing or training program must be instituted.

HEALTH AS A CRITERION

Not only for scientific reasons should health be considered a criterion of social value but also from the popular standpoint of its harmful suggestibility as the chief topic of gossip. Extension of public health information is always commendable but complainings about ill-feelings are so easily and widely utilized as topics of conversation that they have become an obsession, interfering with instinctive development, social organization, economic efficiency and marital responsibility. Whatever objections may be raised toward heterodox religious views whose focus is health, their hygienic soundness in inculcating indifference to imaginary aches and pains should go far to atone for therapeutic superficialities toward actual sickness. On the other hand current tendencies in psycho-therapy that repudiate the patient's somatic complaint and expose the instinctive basis of his conflict, often get rid of the original disorder at the expense of a morbid curiosity of more serious import.

Estimates of the degree of health existing in a given case are reached through analyses undertaken in the various departments of General Medicine. The results of these examinations must be correlated with hereditary and developmental tendencies shown in the individual's personal and social history; with his own introspective account of his thoughts and feelings, and these analytical elements must be

synthetically treated. If the question of conduct is paramount the case clearly is one to be passed upon by Social Medicine.

Although the chief problem here concerns a criterion of social value fully as important as either of our other criteria its treatment by the community generally is much less systematic. Public sympathy often has its sentimental excuses. For example: If the question at issue involves the conduct of an idiot, the individual is treated most humanely by complete segregation in a suitable institution. Rightly his feelings are disregarded, for the welfare of the community. Also when an individual's character is demoralized completely the public demands his confinement. Yet equal degrees of health disorganization excite our public spirit less keenly than they move our sympathy, whose quality is such that we permit the individual to do as he pleases in dealing with the preventive or therapeutic aspects of his disease. Infantile disturbances due to filth, disordered metabolism from unsuitable food, tuberculosis, venereal infections, parasitic invasions, blindness, deafness, "accidents" and skeletal deformities are left largely to voluntary, individual control. Consequently adults of childlike mentality, fearing pain and wanting insight as to the future, develop conditions in which intelligence is stunted, character is disorganized and economic efficiency is reduced to a level of social dependency.

Again, while the teacher, nurse or welfare worker may note the presence of faulty vision, impaired hearing, postural defect, adenoids, severe anemia, St. Vitus's dance, lameness, heart disease, diabetes, epilepsy, mental defect, incipient tuberculosis and mental irresponsibility, it is only the person trained in clinical methods of examination who should be permitted to interpret such symptoms, for symptoms themselves may mean little or much. Faulty vision may mean slight deformities of the lens of the eye, or it may mean congenital syphilis; deafness may be due to accumulation of wax or to middle ear infection; postural defects may come from the need of glasses or from infantile paralysis of the trunk muscles; a child may make faces from imitation or habit or from a serious rheumatic infection associated with severe heart disease; he may limp because he has a nail in his shoe or because he has tuberculosis of the hip joint; he may have fits of absent-mindedness because he is putting up a radio set at home or because he has incipient epilepsy; he may be dull because he is deaf or because he has a defective brain.⁶

So dependent is health upon adequate diet, physical activities,

⁶ Faber, H. K., *Health Education*, Jour. Amer. Med. Assoc., 1924, Vol. 82, p. 413.

rest, shelter and a just wage and so well adapted is the natural environment to supply these needs, that it is all the more to be regretted when appetites are controlled too largely by animal wants and surroundings are unutilized, not so often from poverty as from neglect and ignorance. Much of this wastage of human life and of physical supplies is due to inadequate educational effort. Some of its results

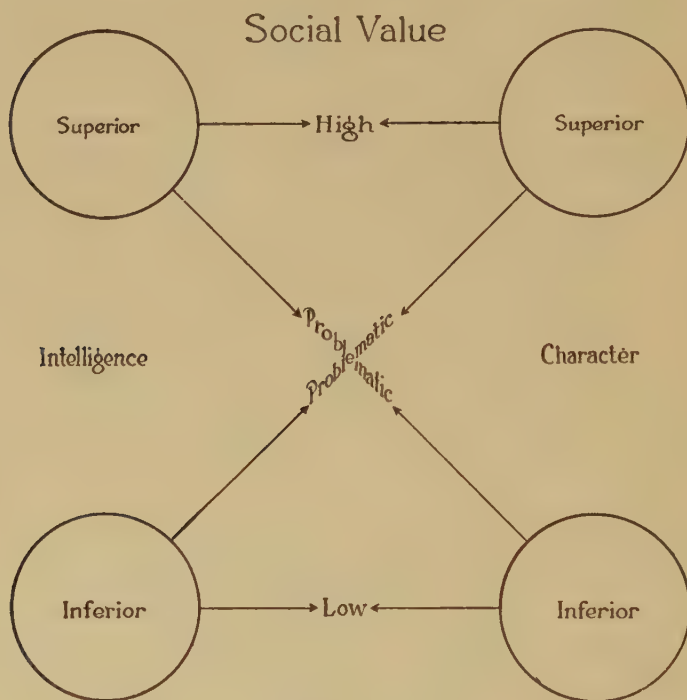


FIG. 10

from social conceptions long outgrown, and no little from inherent inertia in putting into effect principles newly established yet still unpopular. Sound dietetics, sexual hygiene, temperate living, and a greater degree of civic tranquillity exemplify these principles. Physical vigor, however, as measured by health is the most obvious of our three criteria and in spite of popular disregard as a cultural factor in civilization is the first requisite for social efficiency.

INTERPRETATION OF SOCIAL VALUE

While health stands supreme as a qualification for social efficiency, character and intelligence actually measure success since inadequate health is sympathetically overlooked, while sense and virtue are expected of everyone. As combinations of elements result in a variety of substances, each containing the same qualities but mixed in different quantities, so society is made up of a variety of individuals, each containing different proportions of intelligence and character. If present in disproportionate amounts the result may be inharmonious and require adjustment. If all elements are present in a low degree the result obviously will be inadequate. High degrees both of intelligence and character naturally produce superior personalities. Figure 10 represents the situation objectively.⁵

Here we are seeking to analyze the individual's social value. The contrasted elements are "intelligence" and "character."

Persons possessing superior qualifications in each of these categories acquire a high value in the community. They require no help but rather supply assistance.

As a direct antithesis is the group unable to grasp situations either quickly or adequately for self-support, of inferior capacity in controlling its appetites and feelings, distinctly a community liability. If allowed their freedom in the neighborhood the unstable feeble-minded still must have help in adjusting themselves to simple exigencies.

Two cross groups furnish most of our social problems. The intelligent, poorly balanced victim of intemperate habits provides a good example of the "misunderstood," "black sheep," "vagrant," "constitutionally inferior," criminal person, who refutes the contention that most institutional cases are feeble-minded. For his mentality often comes to the rescue in helping us adjust him more quickly than his less intelligent colleague in the next social group can be adjusted.

Persons of inferior mentality but of stable character compose a large part of the commonplace population, the backbone of the community. While they are the hewers of wood and drawers of water and sometimes require a long institutional training before habits of responsibility are acquired they are not often a community menace.

The middle strata of the last two groups furnish society its most

annoying problems. Although of moderate intelligence, often with keen senses, good memory, and fair perceptive capacity their mentality contains but a modicum of insight and analytical ability. This type of psychological structure coupled with poorly organized biological tendencies produces a combination well fitted to distract a community organized on a plane of personal friendliness and relying for its maintenance upon the individual responsibility of its members.

CASE-REPORTS

Brevity and terseness should characterize reports of cases and recommendations embodying the results of examinations from the Social Medical viewpoint. Each of the criteria heretofore suggested should be applied to the situation and reported in substance. An "Impression" should summarize the social synthesis. Following is a usual form:

Place and Date

To: Agency (specify name, e.g., Family Welfare Association); attention of (specify name of case-worker).....
 Report on the case of: (Subject's full name).....
 Intelligence:.....
 Character:.....
 Health:.....
 Impression:.....
 Signed.....

From the psychological analyses the individual's *general mental capacity* should be estimated and expressed in decimal form and likewise the results of any *special abilities and disabilities* emerging from the examination. The result, together with evidence indicating the belief that the mental condition observed is the individual's permanent status, or on the other hand that there is hope for further development, is reported under the head of Intelligence.

Above a necessary minimum the value of intelligence as a factor in the individual's social efficiency depends greatly upon the support of other factors of the personality. These additional factors are found to reside in the instinctive constitution, biologically considered. *Character*, therefore, affords an even more important subject for consideration in the social synthesis. As already pointed out

it may follow one of four general types in each of which we consider the significance of *basis and organization* and the development of fundamental affective elements.

General health and physical vigor with any specific details are noted as a third item.

Finally an *impression* of the subject's worth and place in society, and suggestions for his adjustment complete our report.

(See appendix for specimen report.)

CHAPTER IX

SUMMARY

Looking at our subject in retrospect we find a general interest in conduct, justifying its closer study as a scientific field not inaptly termed Social Medicine.

Philosophical, historical and experimental data contribute to an analysis of social problems and suggest ways of harmonizing behavior and of developing conduct.

In this development of culture the subject's historical record is utilized as an important technical instrument, revealing ancestral tendencies and personal characteristics relating to health, character and mentality.

A biological approach is advocated and the basis and organization of character are considered from four angles, each of which serves to support a typical social group. When correlated with intelligence these groups serve to differentiate four types of social value.

Physico-chemical energy is recognized as the fundamental cause of social phenomena whose modes of action or forces are connected with the physiological needs of nutrition, protection and perpetuation of species modified by conditions of society.

As right slowly supplants might in disposing of social differences, evidence based on experiment takes the place of dogmatic belief. What the individual does must be measured by what he is, the relativity of personality and surroundings tempering our estimate of conduct.

Efforts to deal justly with the individual and to protect the group rely greatly upon intelligence and health but mostly upon character, which as Matthew Arnold often stated, is three-fourths of life.

APPENDIX

RECORD FORM
(Usual Type)

(The actual record is a 4-page form of pink bond paper, size 8½ x 11 inches folded, second and fourth pages blank.)

PERSONAL DATA

Name..... Date.....

Address.....

Informant: Mother's name.....

Father's name.....

Nationality (race): Nativity

Literacy

Emigrated

Civic status.....

Marriage date.....

Pedigree chart:

Prenatal factors, birth and
early development:

Illness, accidents,
nervous tendencies,
general health:

School history:

**Instinctive, affective and
emotional tendencies:**

Aptitudes and interests:

(The actual record is a 4-page form of yellow¹bond paper, size 8½ x 11 inches folded, second and fourth pages blank.)

PSYCHOLOGICAL DATA
(GENERAL)

Name	Date	Age	Ment. Cap.	I. C.
------	------	-----	------------	-------

(Insert here the special form employed, either the Binet-Simon; the Yerkes Point Scale; the Stanford Revision or other method.)

PSYCHOLOGICAL DATA
(SPECIAL)

(The actual record is a 4-page form of blue bond paper, size 8½ x 11 inches folded, second and fourth pages blank.)

PHYSICAL DATA

(GENERAL)

Case No.....

Date.....

Weight	Sitting Height	Total Span
--------	----------------	------------

Stature

Chest Circum.

Physical appearance (anomalies, scars, tattoo marks, etc.)

Hair	A. P. F.	Conduct reaction (attitude, mood, etc.)
------	----------------	---

Addiction to drugs or alcohol

Vaccinated against:

Skin and Appendages

Teeth

Nose and throat

Circulatory system

Respiratory system

Genito-urinary system

Abdomen

Skeleton, joints, limbs (full or partial power and motion)

Endocrinal system

General nervous system; vision and hearing

Nutritional reaction and index

Laboratory findings

Statement of general health

Special complaints

Hospital treatment

PHYSICAL DATA
(SPECIAL)

(The actual record is a 4-page form of white bond paper, size 8½ x 11 inches folded, third and fourth pages blank.)

SOCIAL DATA

Case No.....

Date.....

Individual or agency interested
and motive:

Home situation, housing,
mental, etc.:

Parental, custodial or
conjugal connections:

Other associates:

School situation:

Previous vocational activities:

Contact with civil authority:

**Religious and social tendencies
of individual and family:**

Family income:

**Behavior and conduct while
under observation:**

APPENDIX

SPECIMEN RECORD (Result of first interview only)

PERSONAL DATA

Name Gavitt, John B. Date July 12, 1924

Address 44, Dome Street, Baltimore, Md., (rented home of family).

Informant: Subject, parents, Fr. Smith, P. School Dept., Police Dept., neighbors, etc. Mother's name Lewler, Katherine

Father's name Gavitt, John M.

Nationality (race): Irish Nativity Maryland

Literacy English

Emigrated Native

Civic status Citizens

Marriage date 1900

Pedigree chart:

Insert Figure

Prenatal factors, birth and early development: Poverty and anxiety during prenatal period; "up most of time", "considerable swelling"
 Born Baltimore, May 20, 1905.
 Delivery natural, short duration. Breast fed for nine months.
 Walked at 1 1/2 ys.; talked 2 ys.; teeth 7 mos., easy.

Illness, accidents, nervous tendencies, general health:

Measles, 3 ys.; wh. cgh., 3 ys.; mumps, 6 ys. Denies venereal infection (?). Health generally good. No accidents except infra. "We never thought he was nervous".

"At 4ys. fell 18 ft. into alley, struck nail, laceration head, taken to hospital where piece of bone removed (?), there 3 mos., ret'd 4/100. Episode forgotten till 8ys. old when poor conduct began. Has been different ever since. Never dared punish him, fearing spot on head would break open. Doctors said might make him queer and it seems to have". M's statement.

"Fell 10 ys. old, sick some time. Headaches in summer from 14 to 16, all day, severe, none since". Boy's statement.

See Phys.
 Date.

School history: 7 — 14. 1/1, 2/1, 3/2, 4/2, 5/1 & ungraded. "Was so slow teacher worked him up so he could get his work-permit". M's statement. Persistent truant, "to go to movies". Poor in reading and spelling, fair in numbers. Pub.Sch. first 2 yrs., then St. Patrick's 2 yrs., then P.S. 2 yrs. "One year I went only 3 mos." All say very iron. Was at St. Mary's Industrial school 1 yr. in all, three dif. times; best effort there was punished number of times. "Fairly satisfactory boy". Supt. "Never would read at home like others, took no interest in stories or games" Mother.

Instinctive, affective and emotional tendencies:

"Always talking in sleep, screams often, fell out of bed often till 10 ys. old, wet bed occas. till 12 ys.

"Not particular about food but rather small eater."

Began masturbating at 9 ys., continues; emissions (voluntary) infrequent; no worry; denies sex contact (?), "My pals told me to keep away from 'em or I'd get burned". Knows about perversions. Unaggressive, never had a fight, would run; always timid; played with younger children; tantalizer; mischievous; fond of animals, always bringing them home; lazy; irresponsible; no interest nor ability at play; not interested in reading or being read to; delight in destroying food stolen from shop, ate little; fond of breaking windows; easily influenced by older boys; always got caught; no affection for parents "good enough"; casual worker, "what's the use when you can get along without".

Aptitudes and interests:

"Some drawing ability" Mother. (No evidence).

"I want to be an attorney". "Never liked work except driving an automobile.

No real aptitude and utter lack of interest.

PSYCHOLOGICAL DATA

(GENERAL)

Signature of subject.

Date July 12, 1924. Age 17 1/2 Ment. Cap. 11 I. C.

Chooses, twice, prettier in each of three pairs of pictures, 1 each pair. 3

(3) Judgment.

Sees picture lacks: a. arms; b. nose; c. mouth; d. eyes: 1 each. 4

(4) Perception.

Compares twice: 3

a. Lines 5 and 6 cm., 1.

b. Weights 3 and 12 grams, 1.

c. Weights 6 and 15 grams, 1.

(3) Judgment.

Memory span for digits:

a. 374 581, 1.

b. 2947 6135, 1.

c. 85173 96251, 1.

d. 481572 825946, 1.

e. 2749385 6195847, 1.

(5) Memory

Count backwards: 20-1, 4; 15-1, 3; 10-1, 2; 5-1, 1. 4

(4) Memory.

Repeats:

a. It rains. I am hungry. 1. *

b. His name is John. It is a very fine day. 1. *

c. The sun is very large and red. Our train was more than two hours late. 2.

d. It is not necessary to hurt the poor little birds. It is night and all the world rests in sleep. 2.

(6) Memory.

Reaction to pictures: enumeration, 1 each; description, 2 each; interpretation, 3 each.

a. "Saved." 3

b. "The singing lesson." 2

c. "The child Handel." 2

(9) Perception.

Arranges weights: two trials, all correct but one, 1; correct, 2. 2

(2) Kinaesthetic Discrimination

Compares: one difference, 1; two differences, 2 each.

a. Apple and banana.

b. Wood and glass.

c. Paper and cloth.

(6) Analysis.

Defines in terms of use, 1 each; superior to use, 2 each.

a. Knife. cut 1

b. Chair. sit 1

c. Horse. pull 1

d. Baby. a live baby 0

(8) Ideation.

11. Resists suggestion: 1 for each of last three cards resisted. 3

(3) Suggestibility.

12. Copies: a. Square, 1 or 2; b. Diamond, 1 or 2. 4

(4) Motor Co-ordination.

13. Gives words in three minutes: 30-44, 1; 45-59, 2; 60-74, 3; 75-, 4.

First half minute: Fourth half minute:

Second " " Fifth " " 3

Third " " Sixth " "

(4) Association.

14. Makes a sentence containing the words: 2

City, money, river.

(2 or 4) Imagination.

15. Comprehends questions: 2 each.

a. Missed train. 2

b. Someone unkind. 2

c. Action versus words. 2

d. Forgive easier. 0

(8) Judgment.

16. Draws from memory:

a. 1 or 2.

(4) Memory.

b. 1 or 2. 4

17. Sees absurdity: 1 each.

a. Swinging cane. 1

b. Unfortunate bicyclist. 0

c. Three brothers. 0

d. Guide-post directions. 1?

e. Last car. 1??

(5) Judgment.

18. Rearranges sentences: 2 each.

a. My teacher.

b. A good dog. Reads all

d. We started.

(6) Ideation.

19. Defines: 2 each.

a. Charity. 2 "Help some poor".

b. Obedience. 0 "Talk to old lady".

c. Justice. 0 "You want it. Liberty". 2

(6) Ideation.

20. Analogies: 1 each.

a. Oyster is to shell as banana is to, 1

b. Arm is to elbow as leg is to, 1

c. Head is to hat as hand is to,

d. Truth is to falsehood as straight line is to,

e. Known is to unknown as present is to,

f. Storm is to calm as war is to,

(6) Judgment.

$$\frac{66}{87} = .76$$

PSYCHOLOGICAL DATA (SPECIAL)

Stenquist Mechanical Test :

A = 0
B 1
C 0
D 4
E 0
F 4
G 0
H 0
I 2
J 0
11

11
Result = $\frac{11}{100}$,Very poor.

Sensory tests show dull visual and auditory capacity.

Form Boards and various constructive tests show moderate interpretative ability,
inferior learning capacity,fair motor coordination and poor imaginative
faculty.

PHYSICAL DATA
(GENERAL)

Case No. 1327....

Date 7/12/24.

Weight 143

Sitting Height 32 in.

Total Span 67 in.

Stature 65 in.

Chest Circum. 34 in.

Physical appearance (anomalies, scars, tattoo marks, etc.)

Thin, round shouldered, blonde, shifty eyed, unaggressive, suspicious, naive, friendly.

A. plus

Hair P. Plus, plus.

F. Plus minus.

Conduct reaction (attitude, mood, etc.)

Friendly but suspicious, happy, unconcerned over future.

Addiction to drugs or alcohol Beer and occas. whiskey (do'nt like). Vaccinated against: Sm. px.

Skin and appendages Clear and fairly clean, freckled; hair not abundant, dry, nails bitten.

Teeth Molars poor, few old fillings, carious.

Nose and throat Clear; tonsils somewhat hypertrophied, cervical glands sl. enlarged anterior

Circulatory system Slight functional murmur. No evidence of endocarditis.

Respiratory system Not unusual.

Genito-urinary system Rather overdeveloped, sl. varicocele on left, gleet (?). Later shows subacute gonorrhoea.

Abdomen Not unusual.

Skeleton, joints, limbs, (full or partial power and motion) Nothing unusual.

Endocrinal system Thyreid sl. palpable. Xray skull shows "normal sella."

General nervous system; vision and hearing
Rather dull; vision not defective; hearing dull.

Nutritional reaction and index

Not unusual for stage of adolescence.

Laboratory findings

Wasserman neg. Neisser positive. Blood: quality not unusual.

Statement of general health

Satisfactory in general way.

Special complaints

Venereal infection.

Hospital treatment

Never in hospital but once as follows:

"Brt. to hospital p.m. May 1, 1909, injured by fall 15 ft. Bleeding & rather stupid. Put to bed. No serious reaction. All exams essentially negative. Dr. C. operated following morn. Found much extravasated blood under scalp and crack in bone. Was burred out and structure beneath found perfect, no hem. even. Recovery uneventful. Dismissed home May 15. Neurological exam all the while negative." Record.

PHYSICAL DATA
(SPECIAL)

SOCIAL DATA

Case No. 1327.....

Date 7/12/'24.....

Individual or agency interested
and motive:

Mr. Baker, to whom the subject has been paroled by the
Criminal Court; Police Department; Catholic Welfare
Assoc.; various agencies — Dept. Ed., Labor, etc.

"To formulate a plan for boy's future."

Home situation, housing, rental, etc.: Family live in fairly respectable neighborhood, street paved, no
good sanitation, hot, congested, no parks, no lawn.

5 rooms, no bath, 1st. & 3rd. floors; another family (man & wife) on 2nd.; rooms
crowded, 2 in bed, 3 beds in room; rent \$17.; have lived here 3 ys., used to move
every year, sometimes three times. "Hope to get better house soon and perhaps
buy."

Parental, custodial or
conjugal connections: Lives with parents when residence is known. F. & M. liv. & well.
Get on fairly well together. Man easy going. "Good if you do 'nt
bother him". W. Woman energetic, has made more of herself than expected, works
whenever able to find job. Shields boy when father threatens. Poor disciplinarian.
Boy never severely punished. Taken to court several times by father but given
another chance. Family has eight members.

Other associates: Various gangsters and toughs for whom he acts as errand boy, living
with them much of time. No friendships of own age. "Never had a girl". Bill's
girl sometimes takes me round with her". Boy.

School situation: School No. 34 (last), teacher Miss Walker. "Remembers boy well. Small for
age, inferior physically, easily persuaded, not a bad sort, plenty of good traits,
thought would do well but for influence of older cousins (gangsters)".

Prin. Mr. Small. "Boy's home was the cause, no discipline nor responsi-
bility. Never on time. Often absent. Taken to court always had excuse and magis-
trate discharged him. Teacher & Prin. impress favorably.

Previous vocational activities: Record of work at 14 1/2 ys. on work permit, having completed 5th. gr.
Was under partial supervision of "Bureau of Child Labor" till 16. During that time
had at least fourteen jobs. Mostly errands, helper at simple factory (box, can, etc.)
work, drivers helper on truck etc. Average 3 weeks, longest 2 1/2 mos, several only
few days. Wage from \$6. to \$12. Discharged from eight (irresponsibility, couldnt
do work etc.), left five, "too hard", one "closed down". Since 16 has had no work.

Contact with civil authority:

Was in Juv. Ct. several times for truancy, breaking windows, being on RR.,
"disorderly conduct", larceny, etc. Always discharged or sent to St. Mary's (twice).
In Police Court various times for dis. conduct (craps). In Criminal Ct. twice for
stealing from stores. On probation once, sent to St. Mary's once. Present episode
Crim. Ct. for complicity in murder situation.

Religious and social tendencies
of individual and family;

Family Catholic -irregular, standing only fair. Boy rarely at
confes. Confirmed at proper time. Mother firm believer, father
religious.

Family keep to themselves and with few relatives. Well liked
neighborhood, generous. Never in Court except once for alcohol
and non-support.

Boy always smoked, gambled, out nights, away from home, lazy, pil

Family income:

Father. \$15. irreg.

Clara 10. earns \$14. reg.

Jos. 9. " 12. irreg. just now.

Mother does odd jobs to earn pin money for self.

Behavior and conduct while
under observation: .

To Mr. Charles M. Baker and others.

Report on the case of John B. Savitt; aged 19; 44, Dome Street, Baltimore.

Sources: Mental & Physical examination of boy at Cent. Police Station; home, church and neighborhood investigation, exam. of hospital records, public school records, Labor Bureau records, etc.

Mental Capacity:

Observation as well as school data indicate moderate intelligence, hardly equalling formal 5th. grade requirements. At his chronological age the subject has little chance for further structural development, consequently we cannot hope for a quantitative improvement even under favorable surroundings. Analysis of psychological data shows general disability without definite special ability in any direction save perhaps in an imaginative capacity, accountable to surroundings rather than to mentality. I.C. .76 (Normal .91 to 1.10). On the whole one would classify him as a dull boy, a fair vocational type. In spite of his interest in automobiles he has no mechanical aptitude. If the machine broke down he could not repair the simplest defect.

Character:

From a structural standpoint the subject appears to have a good basis for developing character. He is not definitely "neurotic" nor nervously unbalanced. His accident in early life was a trivial circumstance, without bearing so far as structural defect goes, on his later development. Undoubtedly it had an influence on his social development, being utilized by the mother as an excuse from discipline. There appears to be no reason for not organizing his life satisfactorily if placed under suitable discipline. Meantime some special interest may emerge toward which his social development may be directed sympathetically.

Health:

Except for subacute gonorrhea he appears to be well nourished, physically vigorous and in health.

Impression:

One gathers the impression that we are dealing with material out of which another member of the dull populace must be made. Without special ability at present tendencies toward vocational adjustment are indefinite and await further observations of interests and needs. There is reason to conclude that he will develop and organize conduct satisfactorily if he can be placed in an environment where he cannot shirk responsibility and can be assured of sympathetic but not sentimental supervision. Clearly it is not advisable to return him to his own home, neither would a "boarding home" furnish adequate training facilities. Imprisonment is not constructive. A moderate institutional environment in the nature of a Trade School appears to offer the best solution. Wherever he is he should be under the sympathetic direction of a competent probation officer with whom he might confer and advise.

Signed

APPENDIX

RECORD FORM

(Adapted to use of Attendance Department, Public Schools)

Case No.		Name				School No.
		Address				Date
Sex	Age	Color	Nativity	Nationality	Religion	Civic status of family

Pedigree Chart

Neighborhood	Home	Income	Rent	Contact with Charitable Agencies
Intelligence	Character (habits)	Health and Physique		Abilities and Interests
Test	Basis	Organization		
Associates	Recreation Vocation	School History	Truancy (reasons) and court record	Impression

APPENDIX

RECORD FORM

(Adapted to use of Prisons)

HISTORY AND RECORD

of

NUMBER.....

Christian Name:

Surname:

Date of Admission:

Nationality:

Place and Date of Birth:

Color:

Verification (Statement, Certificate, Passport):

Finger Print—Classification:

Offence:

Committal:
(Place and Court)

Conviction:

Sentence:

Date:

Detainer:

Date of Discharge:

Sentence Date:

192

Commuted date (Short time):

192

On Parole:

192

Actual date discharged:

192

PHOTOGRAPHS

On reception

On Discharge

PERSONAL DATA

Address of last place of residence and whether
home or lodgings:

Married:

Single:

Name and address of wife and of dependent chil-
dren and relatives:

Names and addresses of parents or next of kin,
occupation and family condition (living,
married, separated, divorced, common law,
illegitimate):

PERSONAL DATA

Civic Status of parents:

Citizens

Literate

Allens

Birthplace

Date of marriage

Date of emigration

Character of home and relations with family:

Alleged excuse for present position:

Religion:

Interested agencies, individuals and motives of interest:

Valuables in custody:

(Parental and Industrial Schools, Reformatories, Hospitals, Asylums, Etc.)

Sentence (Itemize)	Court and Place	Date	Offence	Name or Alias	Prison or Institution

EDUCATION

Standard of Accomplishment:

School attendance prior to commitment:

	On arrival	On discharge:
Reading:		
Writing:		
Arithmetic:		
Drawing:		
Music:		
Other subjects:		

Attendance on institutional classes and progress:

PSYCHOLOGICAL EXAMINATION

Chronological Age:

Comparative mentality:

Intelligence Quotient or Coefficient:

General Intelligence:

Special ability and disability:

Dependent:

Semi-dependent

Dull:

Backward:

Commonplace

Usual:

Creative:

PEDIGREE CHART

PERSONAL CHARACTERISTICS

Instinctive, affective and emotional tendencies (appetites and feelings)

PERSONAL NARRATIVE
(Including habits and details of wrongdoing)

CONDUCT REPORTS

General remarks of officers respecting prisoner's temperament, attitude, outlook on life, manner, mood, complaints and reasons for dissatisfaction, progress and proficiency, interests and aptitudes.

INSTITUTIONAL HISTORY

All incidents worthy of note to be recorded in chronological order, and to be denoted by an index letter, e. g., A. applications; D. deprivation of privilege; E. employment; G. movements in grade; H. hospital and medical officers remarks; L. V. letters and visits; M. misconduct and punishment (to be entered in red); P. petitions.

Index letter	Date	Particulars	Remarks
--------------	------	-------------	---------

MEDICAL RECORD

.....
 Weight (nude) (date and hour); Stature (Frankfort plane)
 Physical appearance (anomalies, scars, tattoo marks, etc.) and identification record
 Conduct-reaction (attitude, mood, etc.)
 Addiction to drugs or alcohol

Summary of Examination

	Admission	Discharge
Skin:		
Teeth:		
Nose and Throat:		
Circulatory system:		
Respiratory system:		
Genito-urinary system:		
Abdomen:		
Skeleton, joints, limbs (full or partial power and motion):		
Endocrinal system:		
General nervous system including vision and hearing:		
Nutritional reaction and index:		
Laboratory findings:		
Vaccination:		
Immunity:		

HEALTH RECORD

	Admission	Discharge
Illness, accidents, convulsive attacks, surgical and hospital record, etc.:		
Personal statement of general health:		
Special complaints:		
Fit for:		
a—All forms of hard labor:		
b—Special vocational adjustment (characteristics):		
c—Rehabilitation:		
d—Transfer (state hospital, etc.):		

Former or subsequent admissions to this or other hospitals

Date:

Case No.:

Diagnosis:

Result:

HOSPITAL RECORD

Date

Complaint:

Personal History:

Official History:

Admitted:

Discharged:

Diagnosis:

Result:

(Intercurrent Records attached)

(Above form to be repeated with each subsequent record)

HOSPITAL RECORD

Date.....

Complaint:

Personal History:

Official History:

Admitted:

Discharged:

Diagnosis:

Result:

(Intercurrent records attached)

(Above form to be repeated with each subsequent record)

WASSERMANN RECORD

Name

Race:

Age:

No.:

Shops:

1st Wassermann

Return:

Treatment

2nd Wassermann

Return:

Treatment

3rd Wassermann

Return:

Treatment

4th Wassermann

Return:

Treatment

5th Wassermann

Return:

Treatment

6th Wassermann

Return:

Treatment

7th Wassermann

Return:

Treatment

8th Wassermann

Return:

Treatment

Check before filing

- ☐ Personal Data
- ☐ Education
- ☐ Personal Narrative
- ☐ Conduct Reports
- ☐ Institutional History
- ☐ Medical Record
- ☐ Hospital Record
- ☐ Wassermann Record

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Sans Tache



Sans Tache

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